MDX-C6500RV

SERVICE MANUAL

AEP Model
UK Model

Ver 1.1 2001.05

Model Name Using Similar Mechanism	MDX-C6500R
Base Mechanism Type	MG-164NZ-138
Optical Pick-up Name	KMS-241C/J1NP

SPECIFICATIONS

MD player section

Signal-to-noise ratio	90 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit

Tuner section

FM

Tuning range	87.5 – 108.0 MHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz/450 kHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	66 dB (stereo), 72 dB (mono)
Harmonic distortion at 1 kHz	0.6 % (stereo), 0.3 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

MW/LW

Tuning range	MW: 531 – 1,602 kHz LW: 153 – 279 kHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz/450 kHz
Sensitivity	MW: 30 µV LW: 40 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	50 W × 4 (at 4 ohms)

General

Outputs	Audio outputs Power aerial relay control lead Power amplifier control lead Telephone ATT control lead
Tone controls	Bass ±9 dB at 100 Hz Treble ±9 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 178 × 50 × 183 mm (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 162 mm (w/h/d)
Mass	Approx. 1.2 kg
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1)

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Design and specifications are subject to change without notice.

FM/MW/LW MINIDISC PLAYER

9-870-087-12
2001E0500-1
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Sony Corporation
e Vehicle Company
Shinagawa Tec Service Manual Production Group

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NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

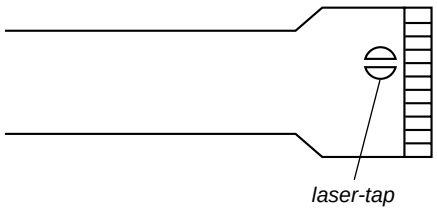
The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

Never look into the laser diode emission from right avove when checking it for adustment. It is feared that you will lose your sight.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK (KMS-241C/J1NP).

The laser diode in the optical pick-up block may suffer electrostatic break-down easily. When handling it, perform soldering bridge to the laser-tap on the flexible board. Also perform m easures against electrostatic break-down sufficiently before the operation. The flexible board is easily damaged and should be handled with care.



OPTICAL PICK-UP FLEXIBLE BOARD

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

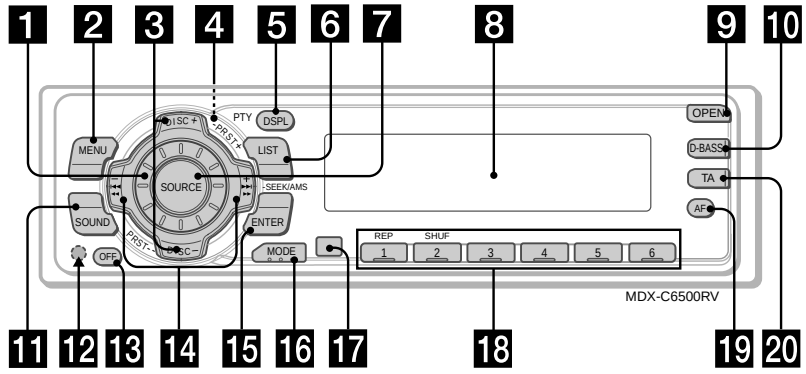
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
GENERAL

This section is extracted from instruction manual.

Location of controls



Refer to the pages listed for details.

1 **Volume control dial 19**

2 **MENU button 8, 10, 12, 13, 14, 15, 16, 18, 19, 21, 24**

3 **DISC/PRST +/– (cursor up/down) buttons 8, 10, 12, 13, 14, 15, 16, 18, 19, 20, 21, 24**

During CD/MD playback:
Disc change 10, 13

During radio reception:
Preset stations select 16

4 **⏏ (eject) button (located on the front side of the unit behind the front panel) 9**

5 **DSPL/PTY (display mode change/ programme type) button 9, 10, 12, 17, 20**

6 **LIST button 12**
List-up **13**

7 **SOURCE (TUNER/CD/MD) button 8, 9, 10, 13, 15, 16, 19**

8 **Display window**

9 **OPEN button 7, 9, 26**

10 **D-BASS button 25**

11 **SOUND button 23**

12 **Reset button (located on the front side of the unit behind the front panel) 7**

13 **OFF button* 7, 8, 9**

14 **SEEK/AMS –/+ (cursor left/right) buttons 8, 10, 12, 14, 16, 18, 19, 21, 23, 24**
Automatic Music Sensor **10, 14**
Manual Search **10**
Seek **15, 16, 18**

15 **ENTER button 8, 10, 12, 13, 14, 15, 16, 18, 19, 20, 21, 24**

16 **MODE button 19**
During CD or MD playback:
CD/MD unit select 9, 13
During radio reception:
BAND select 15, 16

17 **Receptor for the card remote commander**

18 **Number buttons**
During radio reception:
Preset number select 15, 16, 18, 19
During CD/MD playback:
① **REP 11**
② **SHUF 11**

19 **AF button 17, 18, 19**

20 **TA button 18, 19**

* **Warning when installing in a car without ACC (accessory) position on the ignition key switch**
Be sure to press (OFF) on the unit for two seconds to turn off the clock display after turning off the engine.
When you press (OFF) only momentarily, the clock display does not turn off and this causes battery wear.

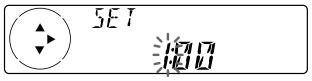
Setting the clock

The clock uses a 24-hour digital indication.

Example: To set the clock to 10:08

1 **Press (MENU), then press either side of (DISC/PRST) repeatedly until "CLOCK" appears.**

❶ **Press (ENTER).**



The hour indication flashes.

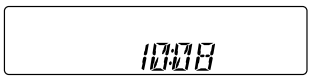
❷ **Press either side of (DISC/PRST) to set the hour.**

❸ **Press the (+) side of (SEEK/AMS).**

The minute indication flashes.

❹ **Press either side of (DISC/PRST) to set the minute.**

2 **Press (ENTER).**



The clock starts.

After the clock setting is completed, the display returns to normal play mode.

Tip
You can set the clock automatically with the RDS feature (see page 17).

Note
In the initial setting, the clock indication appears while the unit is turned off.
When the D.INFO mode is set to ON, the time is always displayed (page 24).

Installation

Precautions

- Choose the installation location carefully so that the unit will not interfere with normal driving operations.
- Avoid installing the unit in areas subject to dust, dirt, excessive vibration, or high temperature, such as in direct sunlight or near heater ducts.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

How to detach and attach the front panel

Before installing the unit, detach the front panel.

A To detach

Before detaching the front panel, be sure to press (OFF). Press (OPEN), then slide the front panel to the right side, and pull out the left side.

B To attach

Place the hole ⓐ in the front panel onto the spindle ⓑ on the unit as illustrated, then push the left side in.

Instalación

Precauciones

- Elija cuidadosamente el lugar de montaje de forma que la unidad no dificulte las funciones normales de conducción.
- Evite instalar la unidad donde pueda quedar sometida a altas temperaturas, como a la luz solar directa o al aire de calefacción, o a polvo, suciedad, o vibraciones excesivas.
- Para realizar una instalación segura y firme, utilice solamente la ferretería de montaje suministrada.

Ajuste del ángulo de montaje

Ajuste el ángulo de montaje a menos de 20°.

Forma de extraer e instalar el panel frontal

Antes de instalar la unidad, extraiga el panel frontal.

A Para extraerlo

Antes de extraer el panel frontal, cerciórese de pulsar (OFF). Pulse (OPEN) después, deslícelo hacia la derecha, y por último tire de su parte izquierda.

B Para instalarlo

Coloque el orificio ⓐ del panel frontal en el eje ⓑ de la unidad, como se muestra en la ilustración, y después pulse la parte izquierda.

Montering

Säkerhetsföreskrifter

- Var noga när du väljer var i bilen du monterar bilstereon, så att den inte sitter i vägen när du kör.
- Montera inte bilstereon där den utsätts för värme, t ex solsken eller varmluft, eller där den utsätts för damm, smuts och/eller vibrationer.
- Använd endast de medföljande monteringstillbehören för att vara säker på att bilstereon monteras på ett säkert och korrekt sätt.

Tillåten monteringsvinkel

Monteringsvinkeln får inte vara större än 20 grader.

Ta loss/fästa frontpanelen

Ta loss frontpanelen innan du monterar bilstereon.

A Ta loss frontpanelen

Var noga med att trycka på (OFF) innan frontpanelen tas loss. Tryck därefter på (OPEN) för att öppna frontpanelen. Skjut frontpanelen åt höger och dra dess vänstra del utåt för att ta loss frontpanelen.

B Fästa frontpanelen

Placera frontpanelen så att hålet ⓐ på frontpanelen träs över axeln ⓑ på bilstereon enligt illustrationen. Tryck därefter frontpanelens vänstra del inåt.

Instalação

Precauções

- Escolha com cuidado um local apropriado para a montagem do aparelho, para que este não interfira com as manobras necessárias à condução do veículo.
- Evite instalar o aparelho onde possa estar sujeito a altas temperaturas, como em locais expostos directamente à luz do sol, ao ar quente dos aquecimentos, ou sujeitos a pó, sujidade ou vibração excessiva.
- Para efectuar uma instalação segura utilize unicamente o material de montagem fornecido.

Ajuste do ângulo de montagem

Ajuste o ângulo de montagem para menos de 20°.

Para retirar e colocar o painel frontal

Retire o painel frontal antes de iniciar a instalação do aparelho.

A Para retirar

Antes de retirar o painel frontal, tem de carregar primeiro em (OFF). A seguir, carregue em (OPEN) para soltar o painel frontal e empurre-o para a direita. Depois puxe o lado esquerdo do painel para fora.

B Para colocar

Coloque o orifício ⓐ do painel frontal no eixo ⓑ do aparelho tal como ilustrado, e depois carregue no lado esquerdo para dentro.

Установка

Меры предосторожности

- Место для установки магнитолы выбирайте тщательно, чтобы она не мешала нормальному управлению автомобилем.
- Не устанавливайте магнитолу там, где она будет подвержена воздействию пыли, грязи, чрезмерной вибрации или высоких температур, например в местах, попадающих под прямые солнечные лучи или находящихся вблизи вентиляционных решеток обогревателей.
- В целях обеспечения надежной и безопасной установки используйте лишь входящие в комплект монтажные детали.

Допустимый угол установки

Установите магнитолу под углом не более 20°.

Порядок снятия и установки передней панели

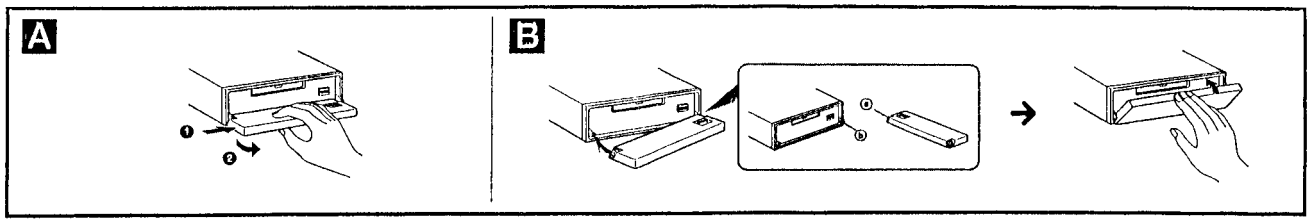
Перед установкой магнитолы снимите с нее переднюю панель.

A Снятие панели

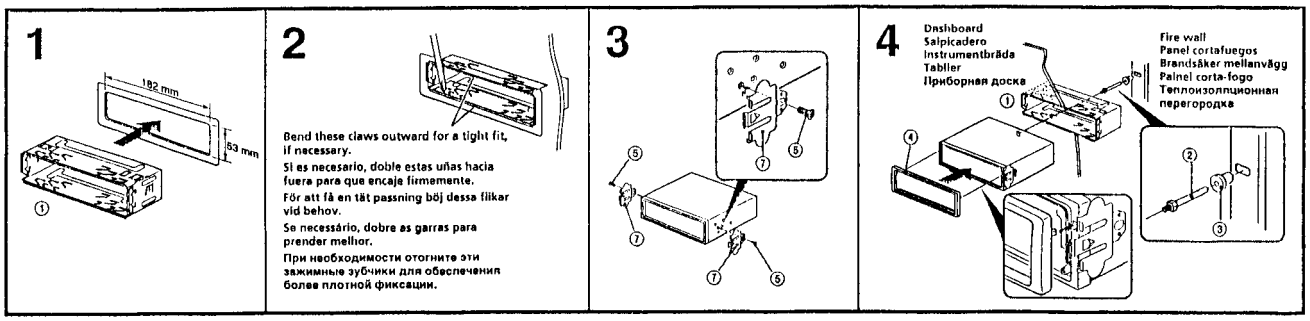
Прежде чем снимать переднюю панель, обязательно отключите магнитолу, нажав клавишу (OFF). Затем нажмите (OPEN), сдвиньте переднюю панель вправо и, потянув за левую часть панели, снимите ее.

B Установка панели

Сначала совместите отверстие ⓐ на передней панели со штырьком ⓑ на магнитоле, как это показано на иллюстрации, а затем вдвиньте в паз левую часть панели.



Installation in the dashboard



Reset button

When the installation and connections are completed, be sure to press the reset button with a ball-point pen, etc.

Botón de reposición

Cuando finalice la instalación y las conexiones, cerciórese de pulsar el botón de reposición con un bolígrafo, etc.

Nollställningsknappen

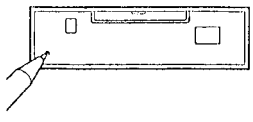
Kom ihåg att använda en penna eller något annat spetsigt föremål för att trycka på nollställningsknappen när anslutningen och monteringen är klar.

Botão de reinicialização

Quando terminar a instalação e as ligações, não se esqueça de carregar no botão de reinicialização com a ponta de uma caneta, etc.

Кнопка переустановки

По окончании установки и всех подсоединений не забудьте нажать кончиком шариковой ручки или иным аналогичным предметом кнопку переустановки.



Connections

Cautions

- This unit is designed for negative ground 12 V DC operation only.
- Be careful not to pinch any wires between the screw and the body of the car, or this unit, or between any moving parts such as the seat railing, etc.
- Connect the power connecting cord (8) to the unit and speakers before connecting it to the auxiliary power connector.
- **Run all ground wires to a common ground point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in combination with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual components' fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.

Notes of connection example

Notes on the control and power supply leads

- The power aerial control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the AF (Alternative Frequency), TA (Traffic Announcement) function.
- A power aerial without a relay box cannot be used with this unit.
- When your car has built-in FM/MW/LW aerial in the rear/side glass, it is necessary to connect the power aerial control lead (blue) or the accessory power input lead (red) to the power terminal of the existing aerial booster. For details, consult your dealer.

Warning

If you have a power aerial without a relay box, connecting this unit with the supplied power connecting cord (8) may damage the aerial.

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition switch is turned off.

Notes on speaker connection

- Before connecting the speakers, turn the unit off.
- Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.
- Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.
- Do not attempt to connect the speakers in parallel.
- Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.

Warning when installing in a car without ACC (accessory) position on the ignition key switch

Be sure to press (OFF) on the unit for two seconds to turn off the clock display after turning off the engine.
When you press (OFF) only momentarily, the clock display does not turn off and this causes battery wear.

Conexiones

Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- Tenga cuidado de no atrapar ningún cable entre algún tornillo y la carrocería del automóvil o esta unidad o entre las partes móviles, como por ejemplo los railes del asiento, etc.
- Conecte el cable de conexión de alimentación (8) a la unidad y los altavoces antes de conectarlo al conector de alimentación auxiliar.
- **Conecte todos los conductores de puesta a masa a un punto común.**
- Conecte el cable amarillo a un circuito libre del automóvil de potencia nominal superior a la del fusible de la unidad. Si conecta esta unidad en combinación con otros componentes estéreo, la potencia nominal del circuito del automóvil a los que dichos componentes estén conectados debe ser superior a la suma de la potencia nominal del fusible de los componentes. Si no existen circuitos de automóvil de potencia nominal tan alta como la del fusible de la unidad, conecte ésta directamente a la batería. Si no hay circuitos de automóvil disponibles para conectar esta unidad, conecte la misma a un circuito de automóvil de potencia nominal superior a la del fusible de la unidad de forma que no se desactiven otros circuitos si el fusible de dicha unidad se funde.

Notas de ejemplo de conexiones

Notas sobre los cables de control y de suministro de alimentación

- El conductor (azul) de control de la antena motorizada suministra +12 V CC al encender el sintonizador o al activar la función AF (Frecuencias alternativas) o TA (Anuncios de tráfico).
- Con esta unidad no podrá utilizarse una antena motorizada sin caja de relés.
- Si el automóvil dispone de una antena de FM/MW/LW incorporada en el cristal trasero/lateral, será necesario conectar el cable de control de antena motorizada (azul) o el cable de entrada de alimentación auxiliar (rojo) al terminal de alimentación del amplificador de antena existente. Para obtener información detallada, consulte a su proveedor.

Advertencia

Si dispone de una antena motorizada sin dispositivo de relé, la conexión de esta unidad con el cable de conexión de alimentación (8) suministrado puede dañar la antena.

Conexión para protección de la memoria

Si conecta el conductor de entrada amarillo, el circuito de la memoria recibirá siempre alimentación, incluso aunque ponga la llave de encendido en la posición de apagado.

Notas sobre la conexión de los altavoces

- Antes de conectar los altavoces, desconecte la alimentación de la unidad.
- Utilice altavoces con una impedancia de 4 a 8 ohmios, y con la potencia máxima admisible adecuada, ya que de lo contrario podría dañarlos.
- No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz izquierdo a los del derecho.
- No intente conectar los altavoces en paralelo.
- No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoces de la unidad. Si lo hiciese, podría dañar tales altavoces. Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.

Advertencia sobre la instalación en un automóvil que no disponga de posición ACC (accesorios) en el interruptor de la llave de encendido

Asegúrese de pulsar (OFF) en la unidad durante dos segundos para desactivar la indicación del reloj después de apagar el motor.
Si pulsa (OFF) sólo momentáneamente, la indicación del reloj no se desactivará y esto causará el desgaste de la batería.

Anslutning

Säkerhetsföreskrifter

- Denna bilstereo är endast avsedd för anslutning till ett negativt jordat, 12 V bilbatteri.
- Var noga med att inga kablar kläms mellan någon skruv eller att de blir klämda mellan rörliga delar som t.ex. bilsätet.
- Anslut strömkabeln (8) till enheten och högtalarna innan du ansluter den till den yttre strömanslutningen.
- **Dra samtliga jordledningar till en och samma jordningspunkt.**
- Anslut den gula kabeln till en ledig bilkrets med en högre ampere än enhetens. Om du seriekopplar enheten till andra stereokomponenter måste den bilkrets de kopplas till ha en högre ampere än summan av de enskilda delarnas amperestyrka. Om det inte finns några bilkretsar med en så hög amperestyrka som enhetens ska du ansluta enheten direkt till batteriet. Om inga bilkretsar finns för anslutning till enheten ska du ansluta enheten till en bilkrets med en högre ampere än enhetens styrka så att inga andra säkringar går om enhetens säkring smälter.

Att observera angående anslutningsexemplen

Ledningarna för styrning och strömförsörjning

- Motorantennens styrkabel (blå) leder +12 V DC när du slår på radion och när du aktiverar någon av funktionerna AF (alternativ frekvens) eller TA (trafikmeddelanden).
- En motorantenn utan styrrelädosa kan inte anslutas till denna bilstereo.
- Om bilen har en FM/MW/LW- antenn inbyggd i bak- eller sidorutan måste du ansluta motorantennens styrkabel (blå) eller strömkabeln för tillbehör (röd) till strömterminalen på den befintliga antennförstärkaren. Din återförsäljare kan ge dig mer information om detta.

Varning

Om du har en motorantenn utan relädosa kan antennen skadas om du ansluter enheten med den medföljande strömkabeln (8).

Anslutning för minnesstöd

När du anslutit den gula, ingående strömkabeln försörjs minneskretsen med ström hela tiden, även när tändläget slås ifrån.

Att observera angående högtalarnas anslutning

- Slå av bilstereon innan du ansluter högtalarna.
- Anslut endast högtalare, vars impedans varierar från 4 till 8 ohm och som har tillräcklig effekthanteringskapacitet för att skydda högtalarna mot skador.
- Anslut inte något av högtalaruttagen till bilens chassi. Anslut inte heller uttagen på höger högtalare till uttagen på vänster högtalare.
- Anslut inte högtalarna parallellt.
- Anslut inte aktiva högtalare (med inbyggda slutsteg) till bilstereons högtalaruttag, eftersom de kan skada de aktiva högtalarna. Var noga med att bara ansluta passiva högtalare till dessa uttag.

Var försiktig när du gör installationen i en bil där tändningsläget saknar tillbehörsläge (ACC)

Glöm inte att stänga av klockvisningen när du har stängt av motorn. Du stänger av den genom att trycka på (OFF) på enheten under två sekunder.
Om du bara trycker på (OFF) ett kort ögonblick slocknar inte klockans teckenfönster, vilket leder till att batteriet laddas ur.

Ligações

Advertência

- Este aparelho foi concebido para funcionar somente com corrente contínua de 12 V com negativo à massa.
- Tenha cuidado para que os fios não fiquem entalados entre os parafusos e a carroçaria do automóvel ou a caixa do aparelho nem entre as peças móveis, por exemplo, as calhas dos bancos, etc.
- Ligue o cabo de alimentação de corrente (8) ao aparelho e aos altifalantes antes de o ligar ao conector de corrente auxiliar.
- **Ligue todos os fios de terra a um ponto de massa comum.**
- Ligue o cabo amarelo a um circuito eléctrico livre do automóvel, cuja tensão seja superior à dos fusíveis do aparelho. Se ligar este aparelho em série com outros componentes estéreo, a tensão do circuito eléctrico do automóvel onde os ligar tem de ser superior à soma das tensões dos fusíveis de todos os componentes individuais. Se não houver nenhum circuito eléctrico do automóvel com uma tensão tão elevada como a dos fusíveis do aparelho, ligue-o directamente à bateria. Se não estiver disponível nenhum circuito eléctrico do automóvel para ligação deste aparelho, ligue-o a um circuito eléctrico do automóvel com uma potência nominal superior à dos fusíveis do aparelho, de tal modo que, se o aparelho rebentar os fusíveis respectivos, nenhum outro circuito seja cortado.

Notas sobre o exemplo de ligação

Notas sobre os fios de controlo e o cabo de alimentação

- O fio de controlo da antena eléctrica (azul) fornece +12 V CC quando ligar o sintonizador ou quando activar a função AF (Frequência alternativa), TA (Informações sobre o trânsito).
- Com este aparelho, não pode utilizar uma antena eléctrica sem relé.
- Se o automóvel tiver uma antena FM/MW/LW integrada no vidro traseiro/lateral, é necessário ligar o fio de controlo da antena eléctrica (azul) ou o cabo de alimentação para acessórios (vermelho) ao terminal eléctrico do amplificador de sinal de antena existente. Para mais informações, consulte o seu agente.

Atenção

Se a antena eléctrica não tiver uma caixa de relé, o facto de ligar este aparelho com o cabo de alimentação (8) fornecido, pode provocar danos na antena.

Ligação para alimentação contínua da memória

Quando o fio amarelo de entrada de alimentação for ligado, os circuitos de memória ficarão com alimentação contínua, mesmo se a chave de ignição estiver desligada.

Notas sobre a ligação dos altifalantes

- Antes de ligar os altifalantes, desligue o aparelho.
- Utilize altifalantes com impedância de 4 a 8 ohm e com capacidade admissível de potência adequada. Caso contrário, os altifalantes poderão sofrer avarias.
- Não ligue os terminais do sistema de altifalantes ao chassis do automóvel e não ligue os terminais do altifalante direito aos terminais do altifalante esquerdo.
- Não tente ligar os altifalantes em paralelo.
- Não ligue nenhum sistema de altifalantes activos (com amplificadores incorporados) aos terminais dos altifalantes do aparelho. Se o fizer, pode avariar o sistema de altifalantes activos. Portanto, não se esqueça de ligar os altifalantes passivos a estes terminais.

Aviso sobre a instalação num automóvel sem posição ACC (acessórios) na chave de ignição

Carregue em (OFF) no aparelho durante dois segundos para desligar o relógio, depois de desligar o motor.
Se carregar em (OFF) menos de dois segundos, o visor do relógio não se apaga o que provoca o desgaste da bateria.

Подсоединение

Предостережения

- Данная автомагнитола предназначена для подключения только к 12-вольтному аккумулятору постоянного тока с заземлением минуса на массу.
- Следите за тем, чтобы не защемить какие-либо провода между винтом и корпусом автомобиля или магнитолы либо между подвижными частями в салоне автомобиля, например, передним сиденьем и металлическими направляющими рейками под ним.
- Подсоедините шнур питания (8) сначала к магнитоле и громкоговорителям, а уже потом - к контактам внешнего источника питания.
- **Подведите все проводе заземления к одной и той же точке заземления.**
- Подсоедините желтый провод к свободной электроцепи автомобиля с большей силой тока чем та, на которую рассчитан предохранитель магнитолы. Если Вы подсоединяете эту магнитолу в сочетании с другими компонентами стереосистемы, сила тока в электроцепи автомобиля, к которой они подключаются, должна быть больше суммы значений силы тока, на которую рассчитаны предохранители отдельных компонентов. В случае отсутствия в автомобиле контура со столь же высокой силой тока, как та, на которую рассчитан предохранитель магнитолы, подсоедините магнитолу напрямую к аккумулятору. В случае если в автомобиле нет свободных электроцепей для подсоединения магнитолы, подсоедините ее к автоэлектроцепи с силой тока выше того значения, на которое рассчитан предохранитель магнитолы, таким образом, чтобы если он перегорит, другие цепи не превались.

Примечания к примеру подсоединения

Примечания к проводам управления и электропитания

- По (синему) проводу питания антенны с электрическим приводом осуществляется подача постоянного тока напряжением +12 вольт при включении Вами радиоприемника или задействовании функций AF (альтернативные частоты), TA (дорожные сообщения).
- Электроприводная антенна, не снабженная релейным блоком, с данной магнитолой использоваться не может.
- В случае если Ваш автомобиль оснащен УКВ/СВ/ДВ антенной, встроенной в заднее/боковое стекло, необходимо подсоединить провод управления электроприводной антенны (синий) или дополнительный провод подводки электропитания (красный) к гнезду питания на автомобильном антенном усилителе.

Предостережение

Если Вы используете электроприводную антенну без релейного блока, подсоединение данной магнитолы посредством прилагаемого шнура питания (8) может привести к повреждению антенны.

Подсоединение для поддержки памяти

Когда к магнитоле подсоединен желтый электрический провод, блок памяти будет постоянно получать питание, даже при выключенном зажигании.

О подсоединении громкоговорителей

- Прежде чем подсоединить громкоговорители, выключите магнитолу.
- Используйте громкоговорители с полным сопротивлением 4-8 Ом, обладающие способностью принимать достаточно мощный сигнал. В противном случае они могут быть повреждены.
- Не подсоединяйте контактные гнезда громкоговорителей к шасси автомобиля и не соединяйте гнезда правого громкоговорителя с гнездами левого.
- Не пытайтесь подсоединить громкоговорители параллельно.
- Не подсоединяйте к гнездам для громкоговорителей на магнитоле какие бы то ни было активные громкоговорители (со встроенными усилителями), поскольку это может привести к повреждению последних. Убедитесь в том, что подсоединяемые громкоговорители относятся к пассивному типу.

Предостережение относительно аппаратуры, установленной в автомобиле, замок зажигания в котором не имеет отдельного положения (ACC) для отключения подсоединенной аппаратуры.

После выключения двигателя не забывайте нажать на две секунды кнопку (OFF) на аппарате, с тем чтобы отключить циферблат часов.
При слишком кратком нажатии (OFF) циферблат не отключается, что ведет к разрядке аккумуляторной батареи.

Connection diagram

Diagrama de conexiones

Kopplingsschema

Diagrama de ligações

Схема подсоединения

Equipment used in illustrations (not supplied)

Front speaker
Altavoz delantero
Främre högtalare
Altifalante dianteiro
Передний громкоговоритель

Equipo utilizado en las ilustraciones (no suministrado)

Rear speaker
Altavoz trasero
Bakre högtalare
Altifalante traseiro
Задний громкоговоритель

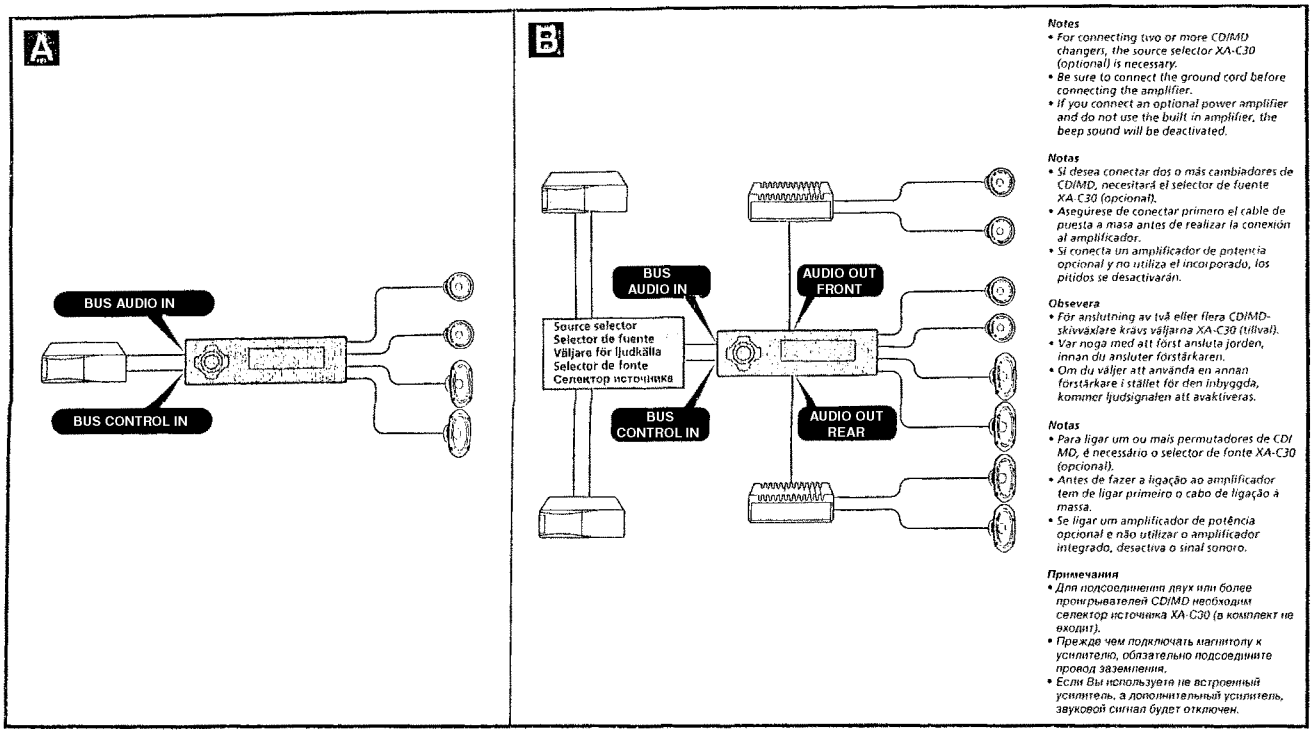
Utrustning som visas i illustrationer (medföljer inte)

Power amplifier
Amplificador de potencia
Effektförstärkare
Amplificador de potência
Усилитель

Equipamento utilizado nas ilustrações (não fornecido)

CD/MD changer
Cambiador de CD/MD
CD/MD-skivväxlare
Permutador de CD/MD
Проигрыватель CD/MD

Аппаратура, фигурирующая в иллюстрациях (не прилагается)



Notes
- *For connecting two or more CD/MD changers, the source selector XA-C30 (optional) is necessary.*
- *Be sure to connect the ground cord before connecting the amplifier.*
- *If you connect an optional power amplifier and do not use the built in amplifier, the beep sound will be deactivated.*

Notas
- *Si desea conectar dos o más cambiadores de CD/MD, necesitará el selector de fuente XA-C30 (opcional).*
- *Asegúrese de conectar primero el cable de puesta a masa antes de realizar la conexión al amplificador.*
- *Si conecta un amplificador de potencia opcional y no utiliza el incorporado, los pitidos se desactivarán.*

Observera
- *För anslutning av två eller flera CD/MD-skivväxlare krävs väljarna XA-C30 (tillval).*
- *Var noga med att först ansluta jorden, innan du ansluter förstärkaren.*
- *Om du väljer att använda en annan förstärkare i stället för den inbyggda, kommer ljudsignalen att avaktiveras.*

Notas
- *Para ligar um ou mais permutadores de CD/MD, é necessário o selector de fonte XA-C30 (opcional).*
- *Antes de fazer a ligação ao amplificador tem de ligar primeiro o cabo de ligação à massa.*
- *Se ligar um amplificador de potência opcional e não utilizar o amplificador integrado, desactiva o sinal sonoro.*

Примечания
- *Для подсоединения двух или более проигрывателей CD/MD необходим селектор источника XA-C30 (в комплект не входит).*
- *Прежде чем подключать магнитолу к усилителю, обязательно подсоедините провод заземления.*
- *Если Вы используете не встроенный усилитель, а дополнительный усилитель, звуковой сигнал будет отключен.*

Connection example

*¹ *Note for the aerial connecting*
If your car aerial is an ISO (International Organisation for Standardisation) type, use the supplied adaptor ⑥ to connect it.
First connect the car aerial to the supplied adaptor, then connect it to the aerial jack of the master unit.
*² *RCA pin cord (not supplied)*

Ejemplo de conexiones

*¹ *Nota sobre la conexión de la antena*
Si la antena del automóvil es del tipo ISO (International Organisation for Standardisation), emplee el adaptador suministrado ⑥ para conectarla.
En primer lugar, conecte la antena del automóvil al adaptador suministrado y, a continuación, a la toma de antena de la unidad principal.
*² *Cable con clavijas RCA (no suministrado)*

Anslutningarna enligt exemplet

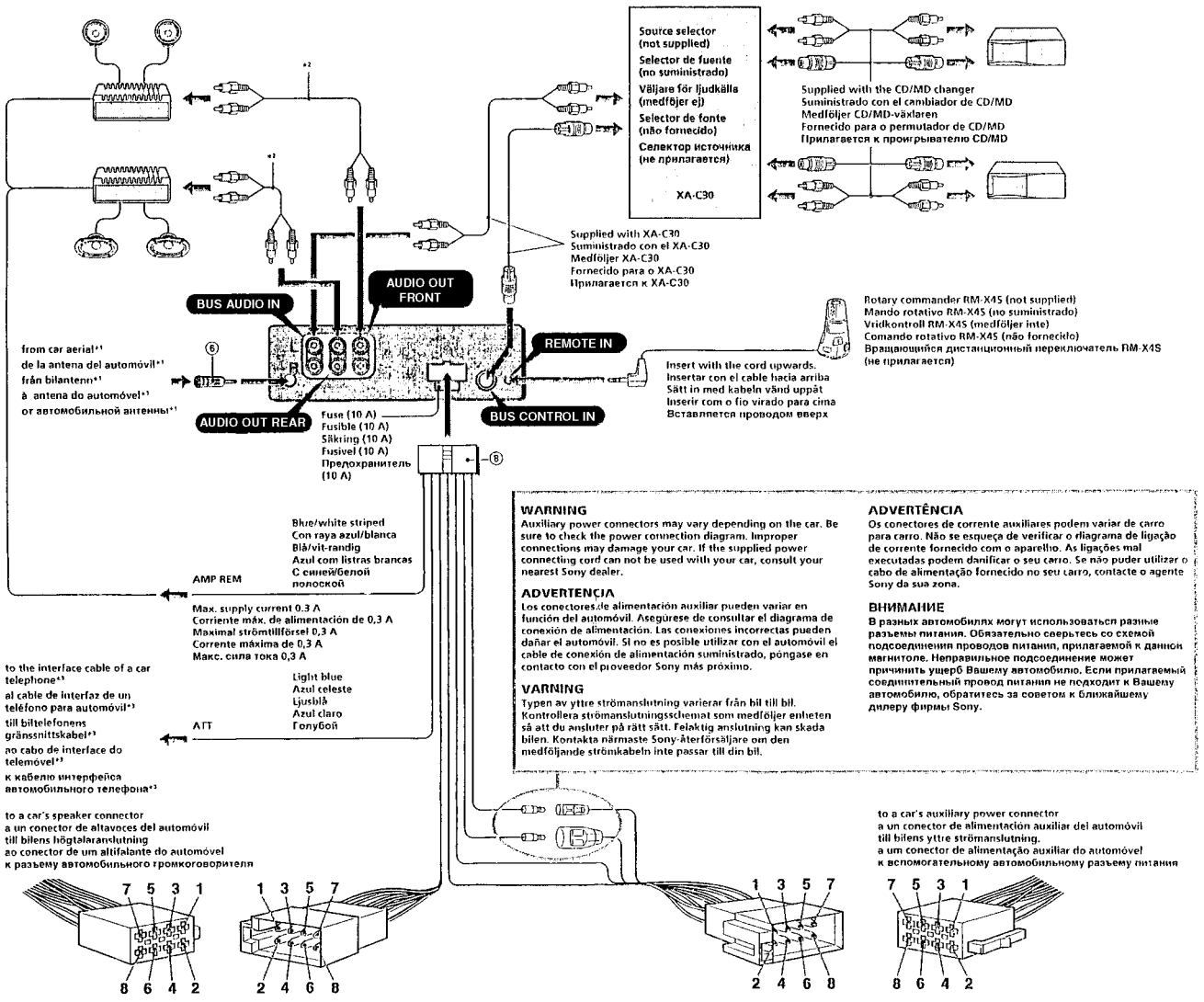
*¹ *Angående antennanslutning*
Om motorantennen är av ISO typ (International Organisation for Standardisation), använder du medföljande adapter ⑥ för att ansluta den.
Anslut först motorantennen till medföljande adapter och därefter till antennuttaget på huvudenheten.
*² *Kabel med RCA-kontakter (medföljer inte)*

Exemplo de ligações

*¹ *Nota referente à ligação da antena*
Se a antena do automóvel for uma antena de tipo ISO (International Organisation for Standardisation), utilize o adaptador fornecido ⑥ para fazer a ligação respectiva.
Ligue primeiro a antena do automóvel ao adaptador fornecido e depois à ficha tipo jack de antena do sistema principal.
*² *Cabo de terminais RCA (não fornecido)*

Пример подсоединения

*¹ *Примечание о подсоединении антенны*
Если антенна в Вашем автомобиле относится к типу, утвержденному ISO (Международной организацией по стандартизации), используйте для ее подсоединения переходник ⑥.
Сначала подсоедините автомобильную антенну к прилагаемому переходнику, а затем - к антенному гнезду магнитолы.
*² *Шнур с контактными штырьками RCA (не прилагается)*


Source selector (not supplied)
Selector de fuente (no suministrado)
Väljare för ljudkälla (medföljer ej)
Selector de fonte (não fornecido)
Селектор источника (не прилагается)
XA-C30
Supplied with the CD/MD changer
Suministrado con el cambiador de CD/MD
Medföljer CD/MD-växlaren
Fornecido para o permutador de CD/MD
Прилагается к проигрывателю CD/MD
Supplied with XA-C30
Suministrado con el XA-C30
Medföljer XA-C30
Fornecido para o XA-C30
Прилагается к XA-C30
AUDIO OUT FRONT
BUS AUDIO IN
REMOTE IN
AUDIO OUT REAR
BUS CONTROL IN
from car aerial*1
de la antena del automóvil*1
från bilantenn*1
à antena do automóvel*1
от автомобильной антенны*1
Fuse (10 A)
Fusible (10 A)
Säkring (10 A)
Fusível (10 A)
Предохранитель (10 A)
Rotary commander RM-X4S (not supplied)
Mando rotativo RM-X4S (no suministrado)
Vridkontroll RM-X4S (medföljer inte)
Comando rotativo RM-X4S (não fornecido)
Вращающийся дистанционный переключатель RM-X4S (не прилагается)
Insert with the cord upwards.
Insertar con el cable hacia arriba
Sätt in med kabeln vänd uppåt
Inserir com o fio virado para cima
Вставляется проводом вверх
Blue/white striped
Con raya azul/blanca
Blå/vit-randig
Azul com listras brancas
С синей/белой полоской
AMP REM
Max. supply current 0.3 A
Corriente máx. de alimentación de 0,3 A
Maximal strömtillförsel 0,3 A
Corrente máxima de 0,3 A
Макс. сила тока 0,3 A
to the interface cable of a car telephone*3
al cable de interfaz de un teléfono para automóvil*3
till biltelefonens gränssnittskabel*3
ao cabo de interface do telemóvel*3
к кабелю интерфейса автомобильного телефона*3
Light blue
Azul celeste
Ljusblå
Azul claro
Голубой
ATT
to a car's speaker connector
a un conector de altavoces del automóvil
till bilens högtalaranslutning
ao conector de um altifalante do automóvel
к разъему автомобильного громкоговорителя
to a car's auxiliary power connector
a un conector de alimentación auxiliar del automóvil
till bilens yttre strömanslutning.
a um conector de alimentação auxiliar do automóvel
к вспомогательному автомобильному разъему питания
7 5 3 1
8 6 4 2
1 3 5 7
2 4 6 8

WARNING
Auxiliary power connectors may vary depending on the car. Be sure to check the power connection diagram. Improper connections may damage your car. If the supplied power connecting cord can not be used with your car, consult your nearest Sony dealer.

ADVERTENCIA
Los conectores de alimentación auxiliar pueden variar en función del automóvil. Asegúrese de consultar el diagrama de conexión de alimentación. Las conexiones incorrectas pueden dañar el automóvil. Si no es posible utilizar con el automóvil el cable de conexión de alimentación suministrado, póngase en contacto con el proveedor Sony más próximo.

VARNING
Typen av yttre strömanslutning varierar från bil till bil. Kontrollera strömanslutningsschemat som medföljer enheten så att du ansluter på rätt sätt. Felaktig anslutning kan skada bilen. Kontakta närmaste Sony-återförsäljare om den medföljande strömkabeln inte passar till din bil.

ADVERTÊNCIA
Os conectores de corrente auxiliares podem variar de carro para carro. Não se esqueça de verificar o diagrama de ligação de corrente fornecido com o aparelho. As ligações mal executadas podem danificar o seu carro. Se não puder utilizar o cabo de alimentação fornecido no seu carro, contacte o agente Sony da sua zona.

ВНИМАНИЕ
В разных автомобилях могут использоваться разные разъемы питания. Обязательно сверьтесь со схемой подсоединения проводов питания, прилагаемой к данной магнитоле. Неправильное подсоединение может причинить ущерб Вашему автомобилю. Если прилагаемый соединительный провод питания не подходит к Вашему автомобилю, обратитесь за советом к ближайшему дилеру фирмы Sony.

1	Purple Púrpura Violett Violeta Фиолетовый	+	Speaker, Rear, Right Altavoz, parte posterior, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito Громкоговоритель, задний, правый	5	White Blanco Vit Branco Белый	+	Speaker, Front, Left Altavoz, parte frontal, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo Громкоговоритель, передний, левый
2		–	Speaker, Rear, Right Altavoz, parte posterior, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito Громкоговоритель, задний, правый	6		–	Speaker, Front, Left Altavoz, parte frontal, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo Громкоговоритель, передний, левый
3	Grey Gris Grå Cinzento Серый	+	Speaker, Front, Right Altavoz, parte frontal, derecho Högtalare, främre, höger Altifalante, Parte da frente, Direito Громкоговоритель, передний, правый	7	Green Verde Grön Verde Зеленый	+	Speaker, Rear, Left Altavoz, parte posterior, izquierdo Högtalare, bakre, vänster Altifalante, Parte de trás, Esquerdo Громкоговоритель, задний, левый
4		–	Speaker, Front, Right Altavoz, parte frontal, derecho Högtalare, främre, höger Altifalante, Parte da frente, Direito Громкоговоритель, передний, правый	8		–	Speaker, Rear, Left Altavoz, parte posterior, izquierdo Högtalare, bakre, vänster Altifalante, Parte de trás, Esquerdo Громкоговоритель, задний, левый

4	Yellow Amarillo Gul Amarelo Желтый	continuous power supply suministro de alimentación continua kontinuerlig strömförsörjning alimentação de corrente contínua непрерывное поступление питания
5	Blue Azul Blå Azul Синий	power aerial control control de antena motorizada styrning av motorantenn antena eléctrica антенная электрика
6	Orange/White Naranja/blanco Orange/vit Cor de laranja/branco Оранжевый/белый	switched illumination power supply fuente de alimentación de iluminación conmutada Switchad strömförsörjning till belysning fonte de alimentação comutada para iluminação подача питания подсветки от зажигания
7	Red Rojo Röd Vermelho Красный	switched power supply suministro conmutado de alimentación switchad strömförsörjning alimentação de corrente comutada включаемое питание
8	Black Negro Svart Preto Черный	ground masa jord Terra земля

Positions 1, 2 and 3 do not have pins.
Las posiciones 1, 2 y 3 no disponen de pines.
Positionerna 1, 2 och 3 saknar stift.
As posições 1, 2 e 3 não têm pinos.
Позиции 1, 2 и 3 не имеют контактных штырьков.

Power connection diagram

Auxiliary power connector may vary depending on the car. Check your car's auxiliary power connector diagram to make sure the connections match correctly. There are three basic types (illustrated below). You may need to switch the positions of the red and yellow leads in the car stereo's power connecting cord. After matching the connections and switched power supply leads correctly, connect the unit to the car's power supply. If you have any questions and problems connecting your unit that are not covered in this manual, please consult the car dealer.

Diagrama de conexión de alimentación

El conector de alimentación auxiliar puede variar en función del automóvil. Compruebe el diagrama del conector de alimentación auxiliar del automóvil para asegurarse de que las conexiones coinciden correctamente. Existen tres tipos básicos (ilustrados a continuación). Es posible que sea necesario cambiar las posiciones de los cables rojo y amarillo del cable de conexión de alimentación del sistema estéreo del automóvil. Después de hacer coincidir correctamente las conexiones y los cables de alimentación conmutada, conecte la unidad al suministro de alimentación del automóvil. Si desea realizar alguna consulta o solucionar algún problema referentes a la conexión de la unidad que no aparezcan en este manual, consulte con el concesionario automovilístico.

Strömanslutningsschema

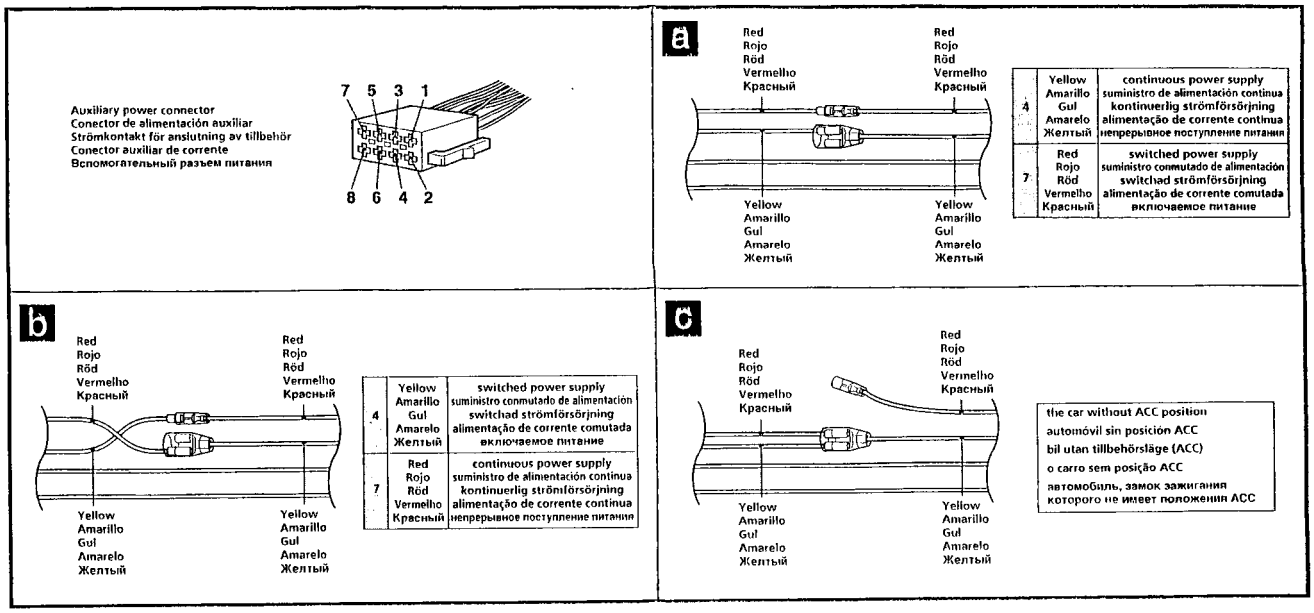
Kontakten för anslutning av tillbehör varierar från bil till bil. Kontrollera hur bilens anslutningskontakt är konstruerad så att du ansluter på rätt sätt. Det finns tre grundläggande typer (visas nedan). Du kan eventuellt behöva växla plats mellan de röda och gula ledningarna i bilstereons strömkabel. Passa ihop ledningarna korrekt och anslut sedan enheten till bilens strömanslutning. Om du får problem eller har frågor som inte besvaras i den här bruksanvisningen kan du kontakta bilåterförsäljaren.

Diagrama de ligação de corrente

O conector auxiliar de corrente pode variar de carro para carro. Verifique o diagrama do conector auxiliar de corrente para se certificar de que as ligações estão bem feitas. Existem três tipos de conectores (ilustrados abaixo). É possível que tenha de trocar as posições dos fios vermelho e amarelo do cabo de alimentação do autorádio. Depois de fazer a correspondência correcta entre as ligações e os cabos de alimentação comutada, ligue o aparelho à fonte de alimentação do carro. Se tiver alguma dúvida ou problema relacionado com o aparelho que não esteja incluído neste manual, consulte o concessionário.

Схема подключения питания

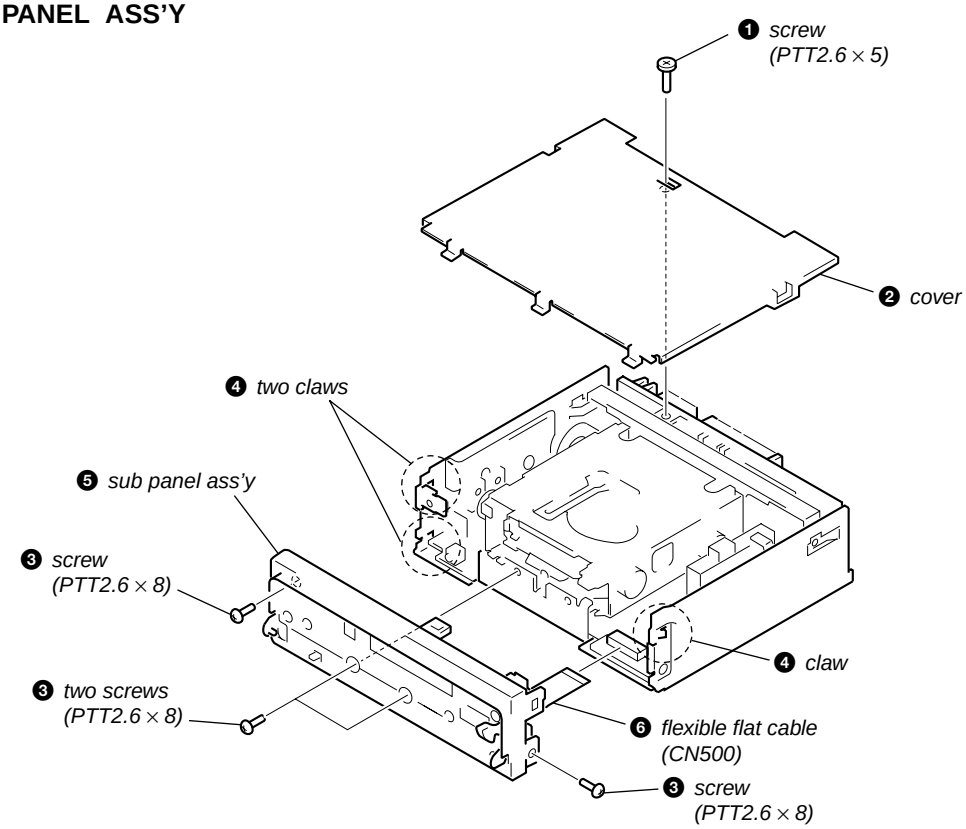
В разных автомобилях могут использоваться разные разъемы вспомогательного питания. Для того чтобы убедиться в правильности подсоединения, обязательно сверьтесь со схемой разъема подключения вспомогательного питания Вашего автомобиля. Есть три основных типа (как показано на рисунке ниже). Возможно, при подключении Вам придется поменять местами красный и желтый провода соединительного кабеля питания стереосистемы. После проверки соответствия разводки разъемов автомобильного электропитания и проводов питания магнитолы подключите магнитолу к автомобильному контуру электропитания. Если у Вас возникли какие-либо вопросы или проблемы, связанные с подключением магнитолы, которые не рассматриваются в настоящем руководстве, обратитесь за советом к дилеру автомобильной фирмы.


Auxiliary power connector
Conector de alimentación auxiliar
Strömkontakt för anslutning av tillbehör
Conector auxiliar de corrente
Вспомогательный разъем питания
7 5 3 1
8 6 4 2
a
Red
Rojo
Röd
Vermelho
Красный
Yellow
Amarillo
Gul
Amarelo
Желтый
4 Yellow Amarillo Gul Amarelo Желтый — continuous power supply / suministro de alimentación continua / kontinuerlig strömförsörjning / alimentação de corrente continua / непрерывное поступление питания
7 Red Rojo Röd Vermelho Красный — switched power supply / suministro conmutado de alimentación / switchad strömförsörjning / alimentação de corrente comutada / включаемое питание
b
4 Yellow Amarillo Gul Amarelo Желтый — switched power supply / suministro conmutado de alimentación / switchad strömförsörjning / alimentação de corrente comutada / включаемое питание
7 Red Rojo Röd Vermelho Красный — continuous power supply / suministro de alimentación continua / kontinuerlig strömförsörjning / alimentação de corrente continua / непрерывное поступление питания
c
the car without ACC position
automóvil sin posición ACC
bil utan tillbehörsläge (ACC)
o carro sem posição ACC
автомобиль, замок зажигания которого не имеет положения ACC

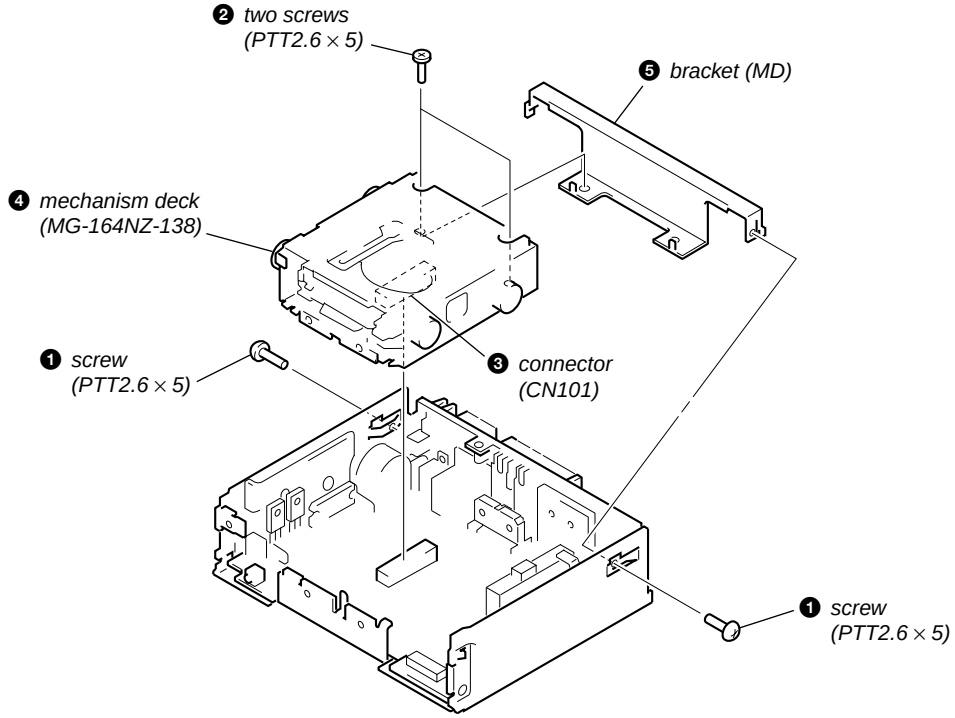
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

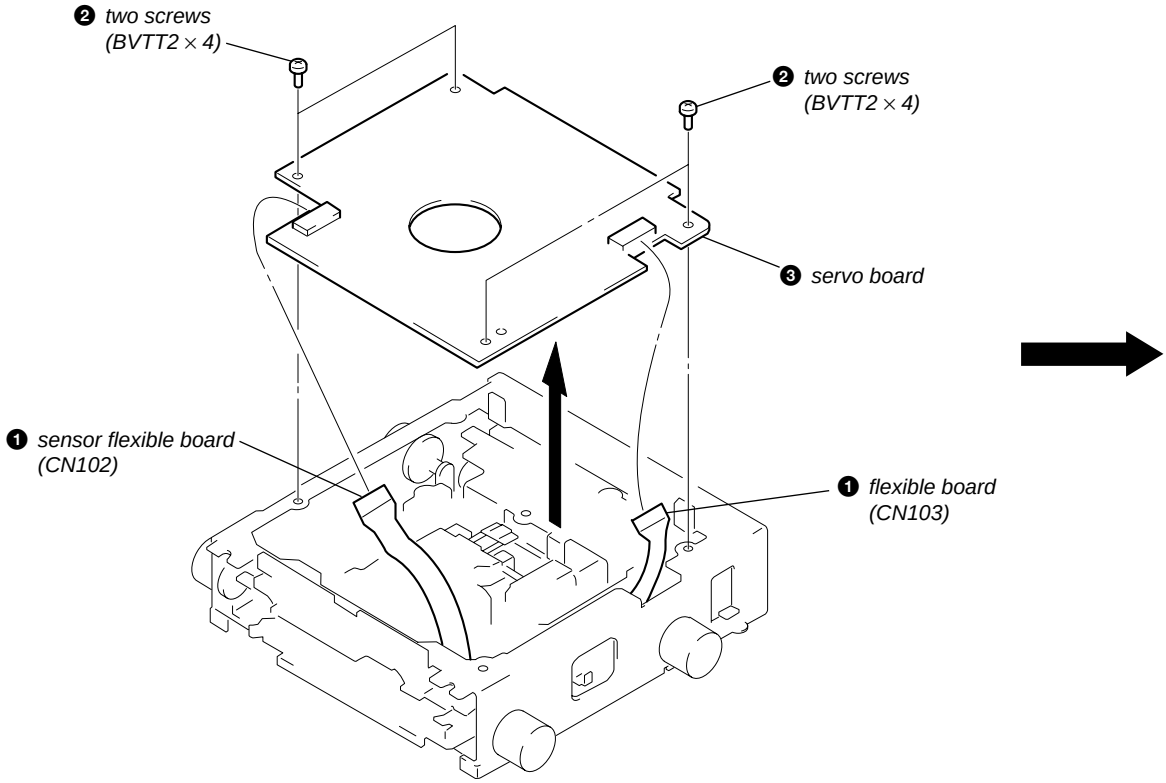
SUB PANEL ASS'Y



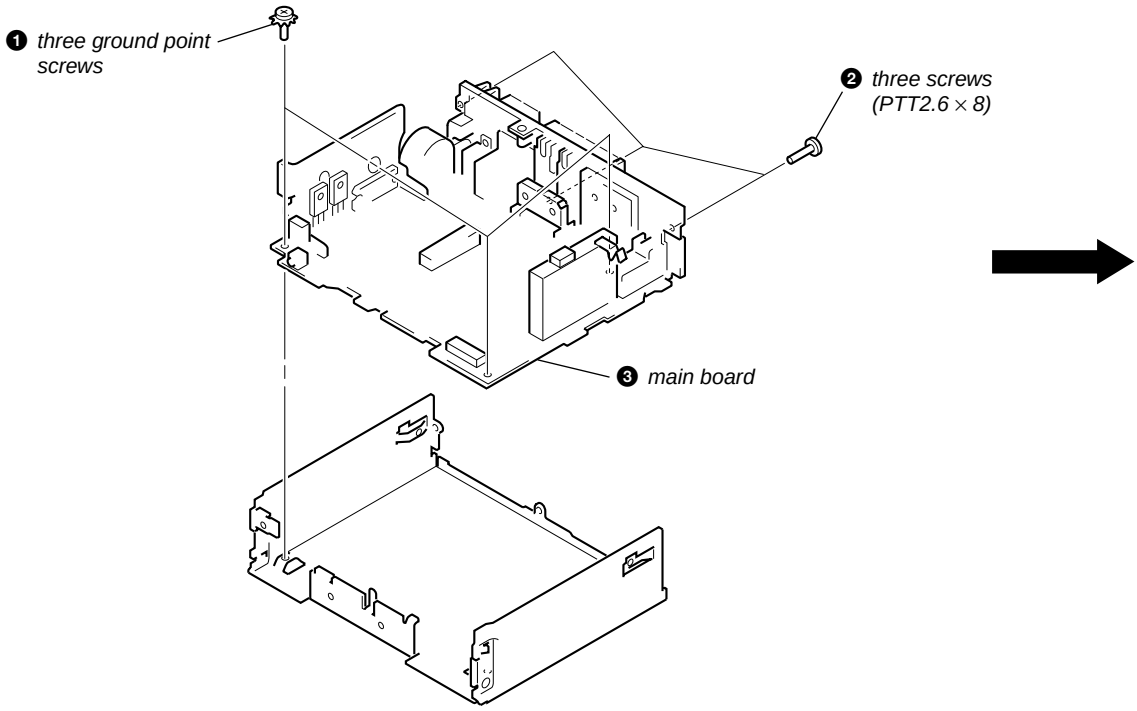
MECHANISM DECK (MG-164NZ-138)



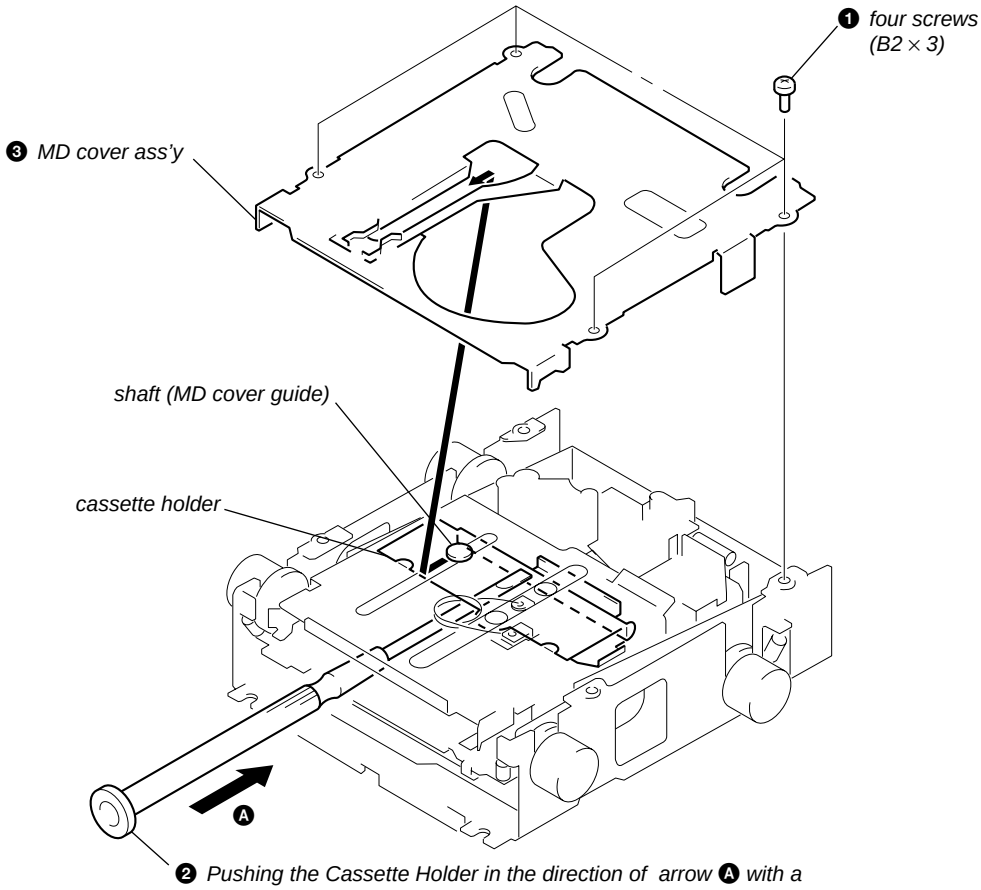
SERVO BOARD



MAIN BOARD



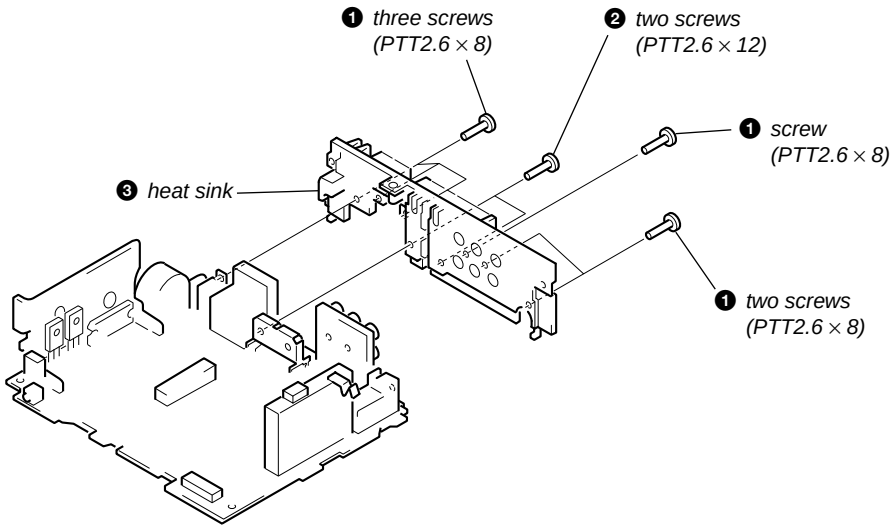
MD COVER ASS'Y



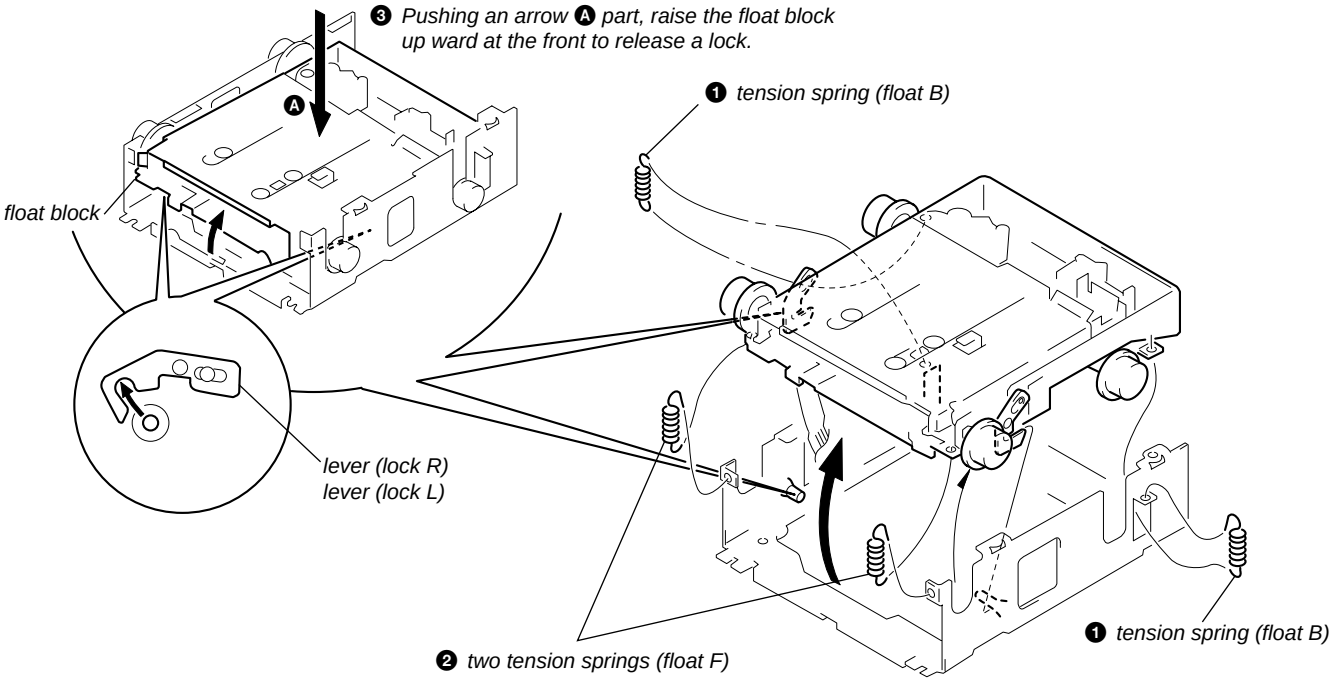
❷ Pushing the Cassette Holder in the direction of arrow Ⓐ with a screwdriver, etc., disengage the Shaft (MD Cover Guide) from the slot in the MD Cover Ass'y.

Note: Take care not to scratch the optiocal Pick-up when pushing the Cassette Holder with a screwdriver. etc.

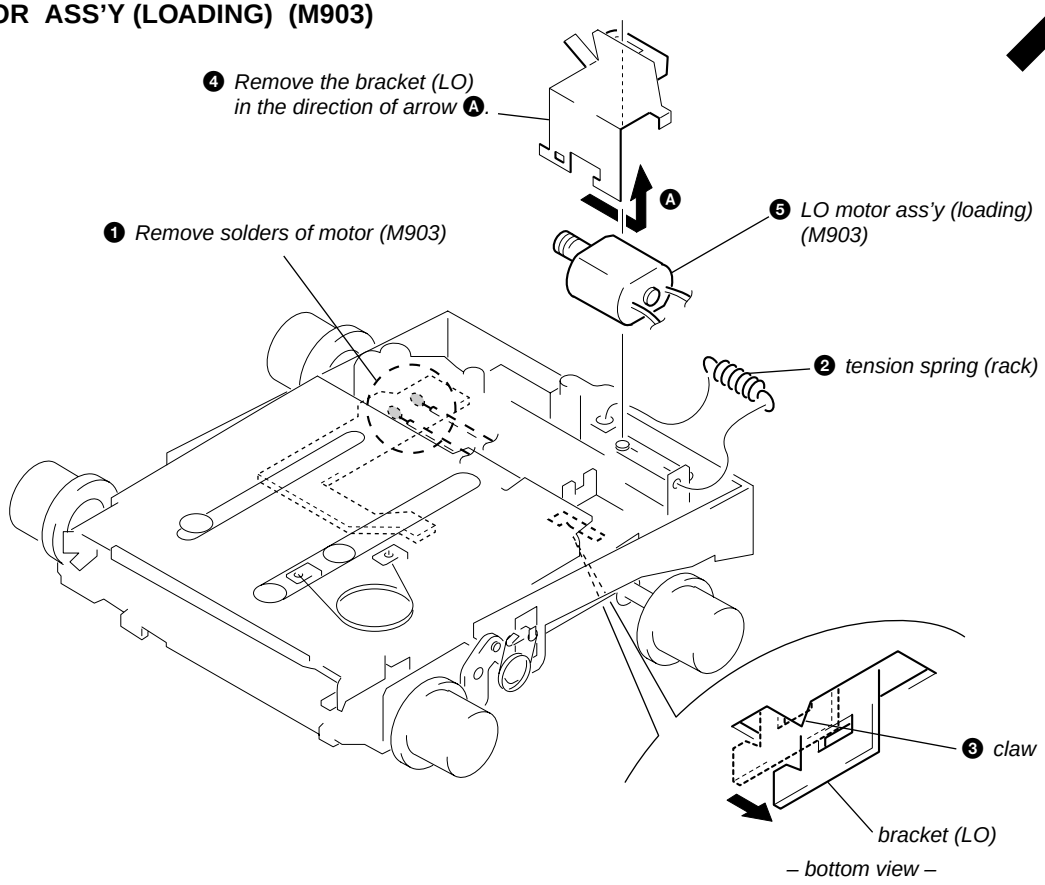
HEAT SINK



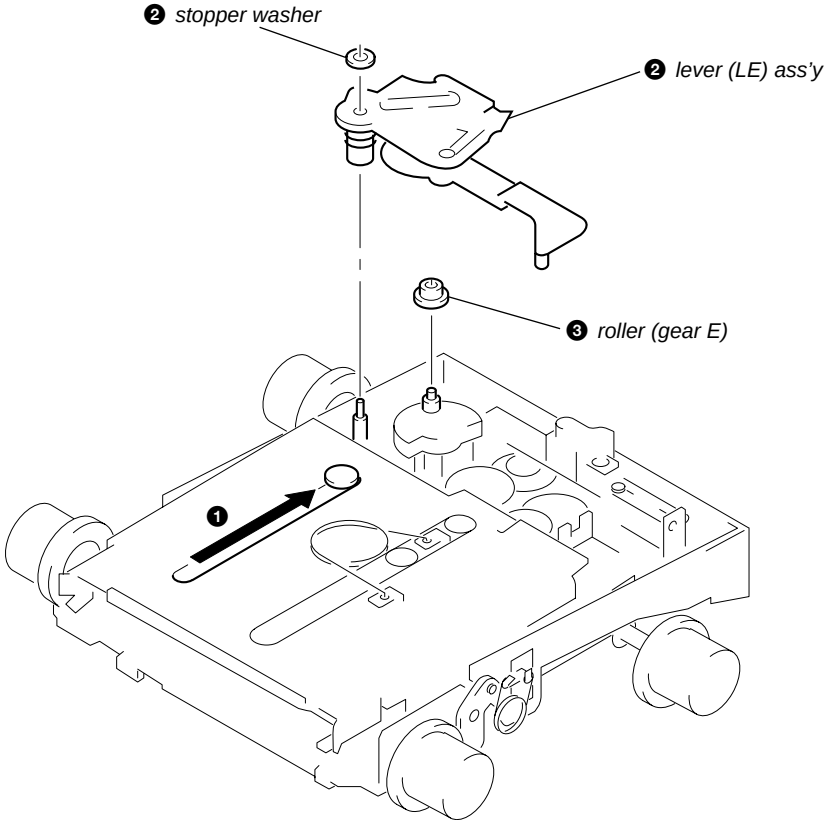
FLOAT BLOCK


❸ Pushing an arrow Ⓐ part, raise the float block up ward at the front to release a lock.
❶ tension spring (float B)
float block
Ⓐ
lever (lock R)
lever (lock L)
❷ two tension springs (float F)
❶ tension spring (float B)

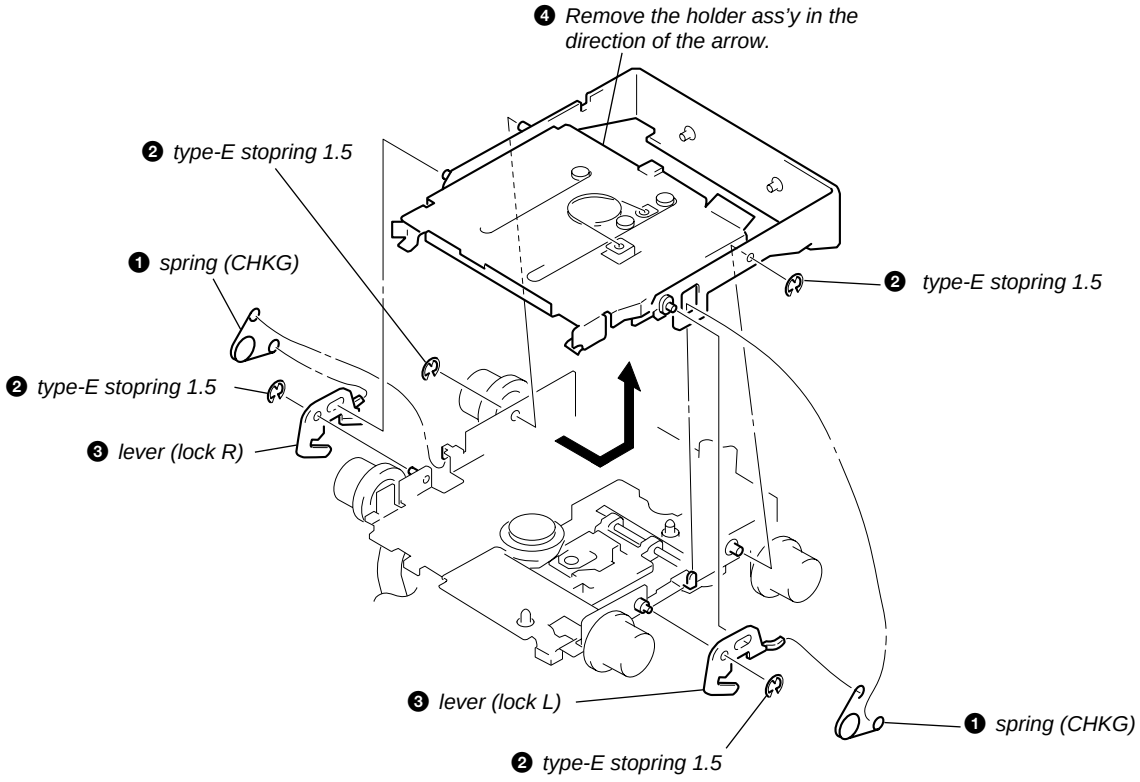
LO MOTOR ASS'Y (LOADING) (M903)


❹ Remove the bracket (LO) in the direction of arrow Ⓐ.
Ⓐ
❺ LO motor ass'y (loading) (M903)
❶ Remove solders of motor (M903)
❷ tension spring (rack)
❸ claw
bracket (LO)
– bottom view –

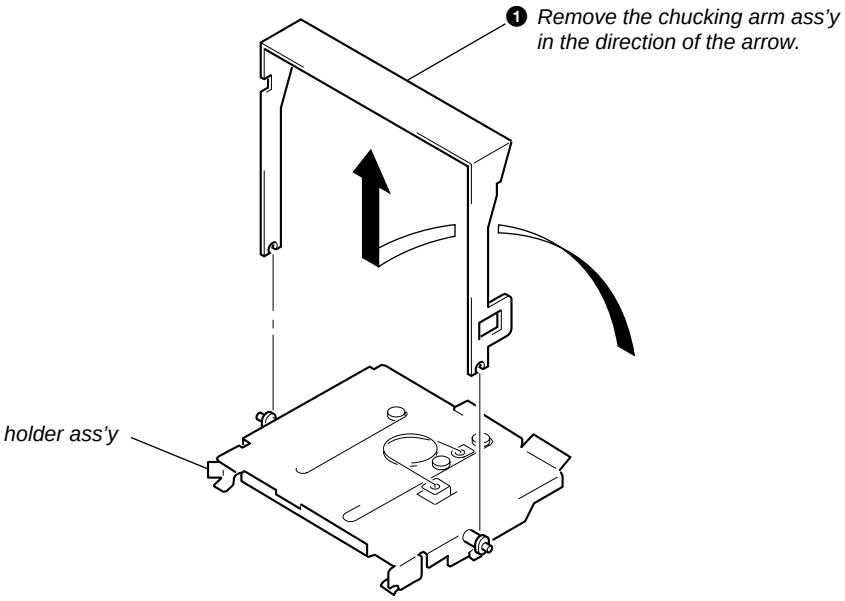
LEVER (LE) ASS'Y



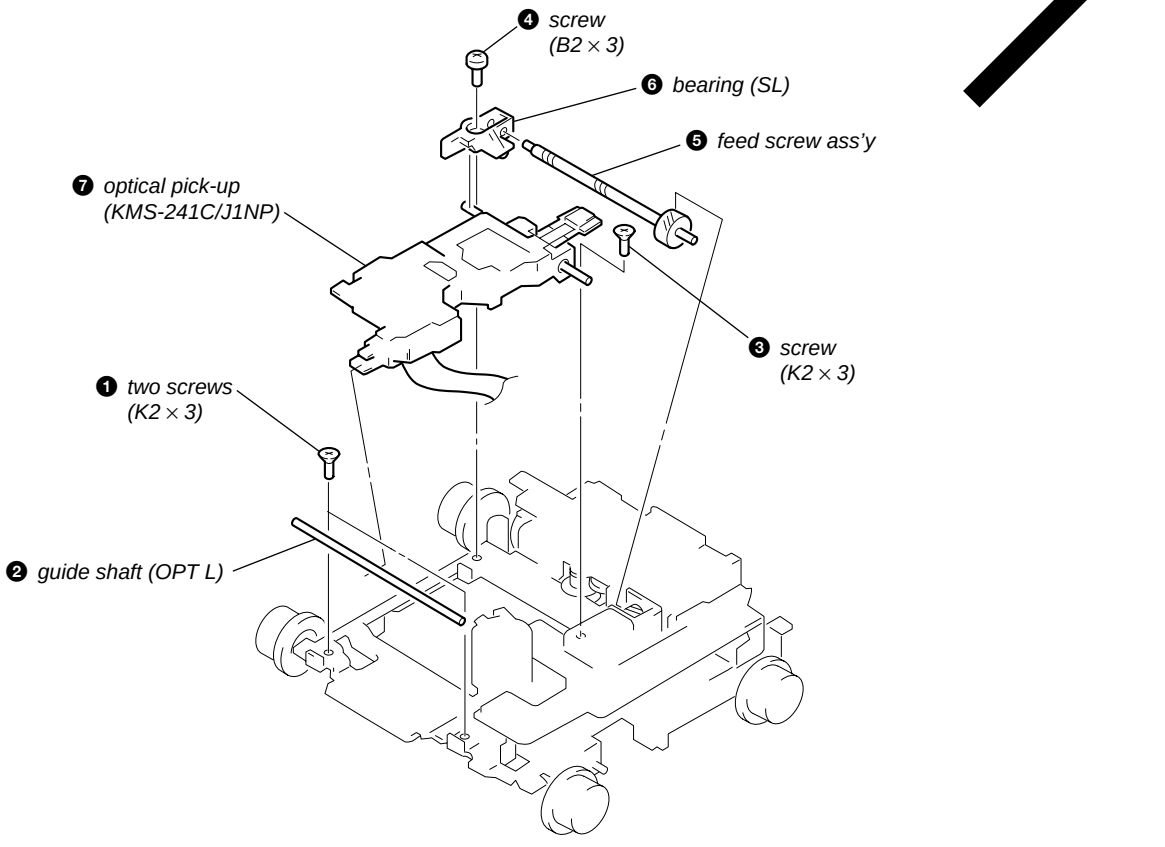
HOLDER ASS'Y


❹ Remove the holder ass'y in the direction of the arrow.
❷ type-E stopring 1.5
❶ spring (CHKG)
❷ type-E stopring 1.5
❷ type-E stopring 1.5
❸ lever (lock R)
❸ lever (lock L)
❶ spring (CHKG)
❷ type-E stopring 1.5

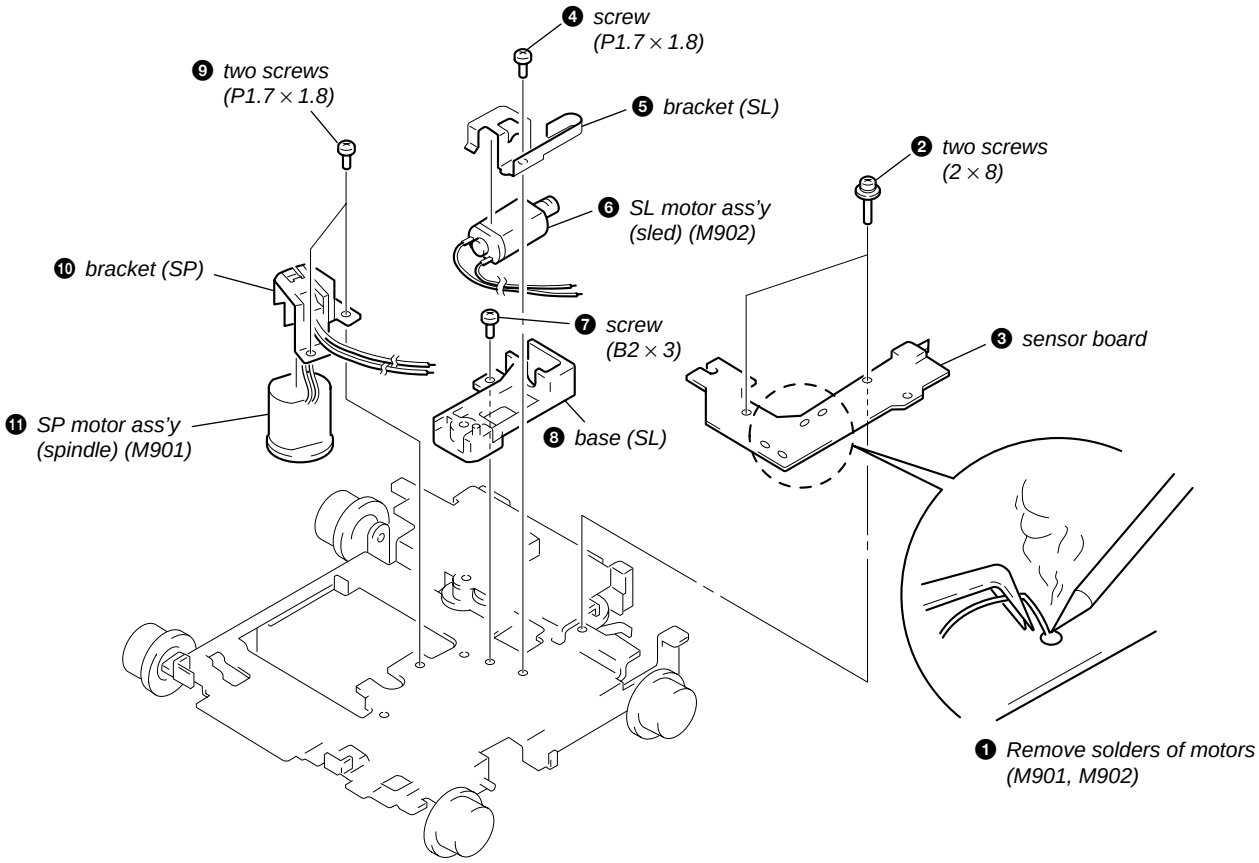
CHUCKING ARM ASS'Y



OPTICAL PICK-UP (KMS-241C/J1NP)



SL MOTOR ASS'Y (SLED) (M902), SP MOTOR ASS'Y (SPINDLE) (M901)



SECTION 3
ELECTRICAL ADJUSTMENTS

TEST MODE

This set have the test mode function.

<Set the Test Mode>

1. Turn ON the regulated power supply. (The clock is displayed)
   Note: Press the [OFF] button, if the clock is not displayed.
2. Push the preset [4] button.
3. Push the preset [5] button.
4. Press the preset [1] button for more than two seconds.
5. Then the display indicates all lights, the test mode is set.

<Release the Test mode>

1. Push the [OFF] button.

MD SECTION

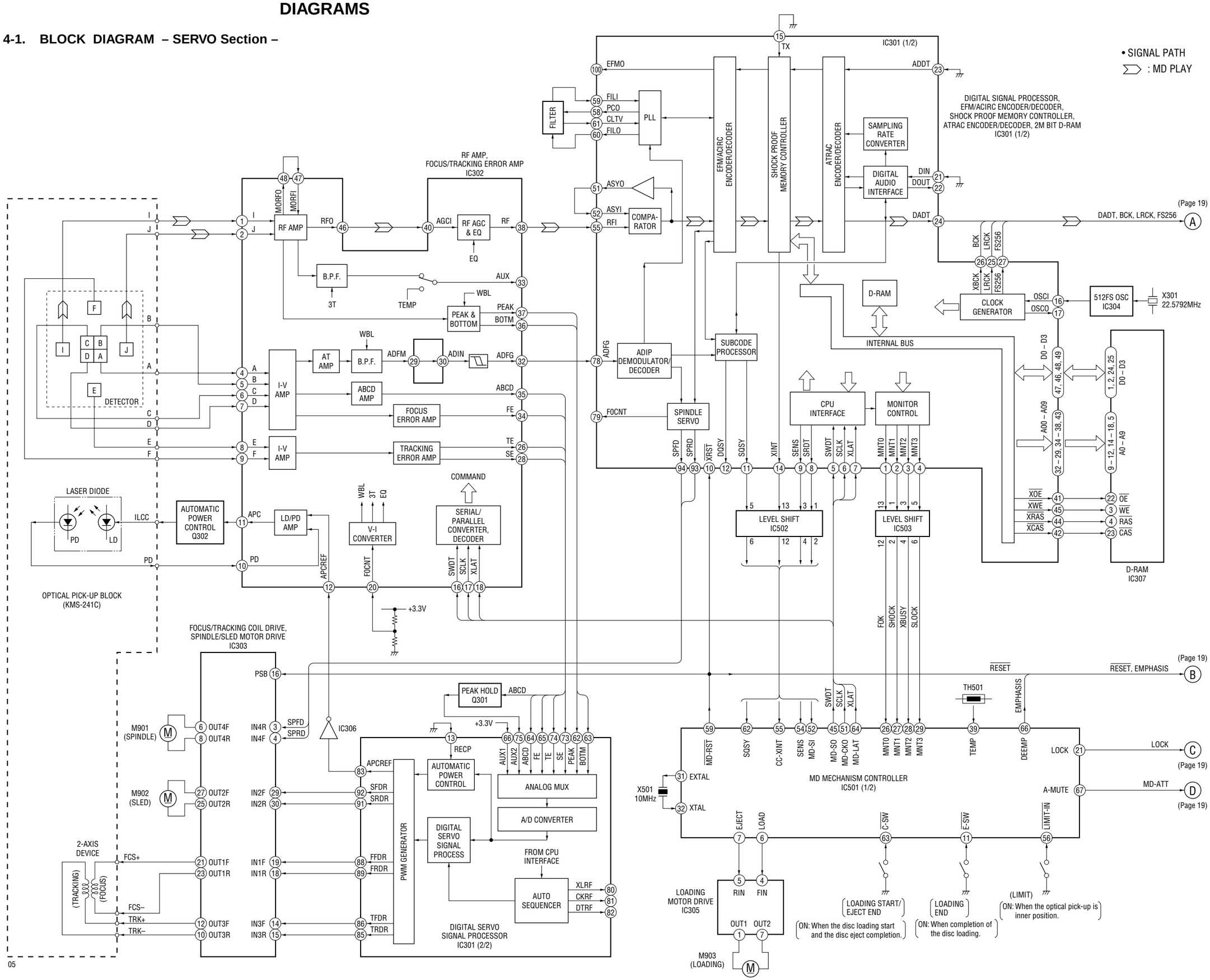
MD section adjustments are done automatically in this set.

TUNER SECTION

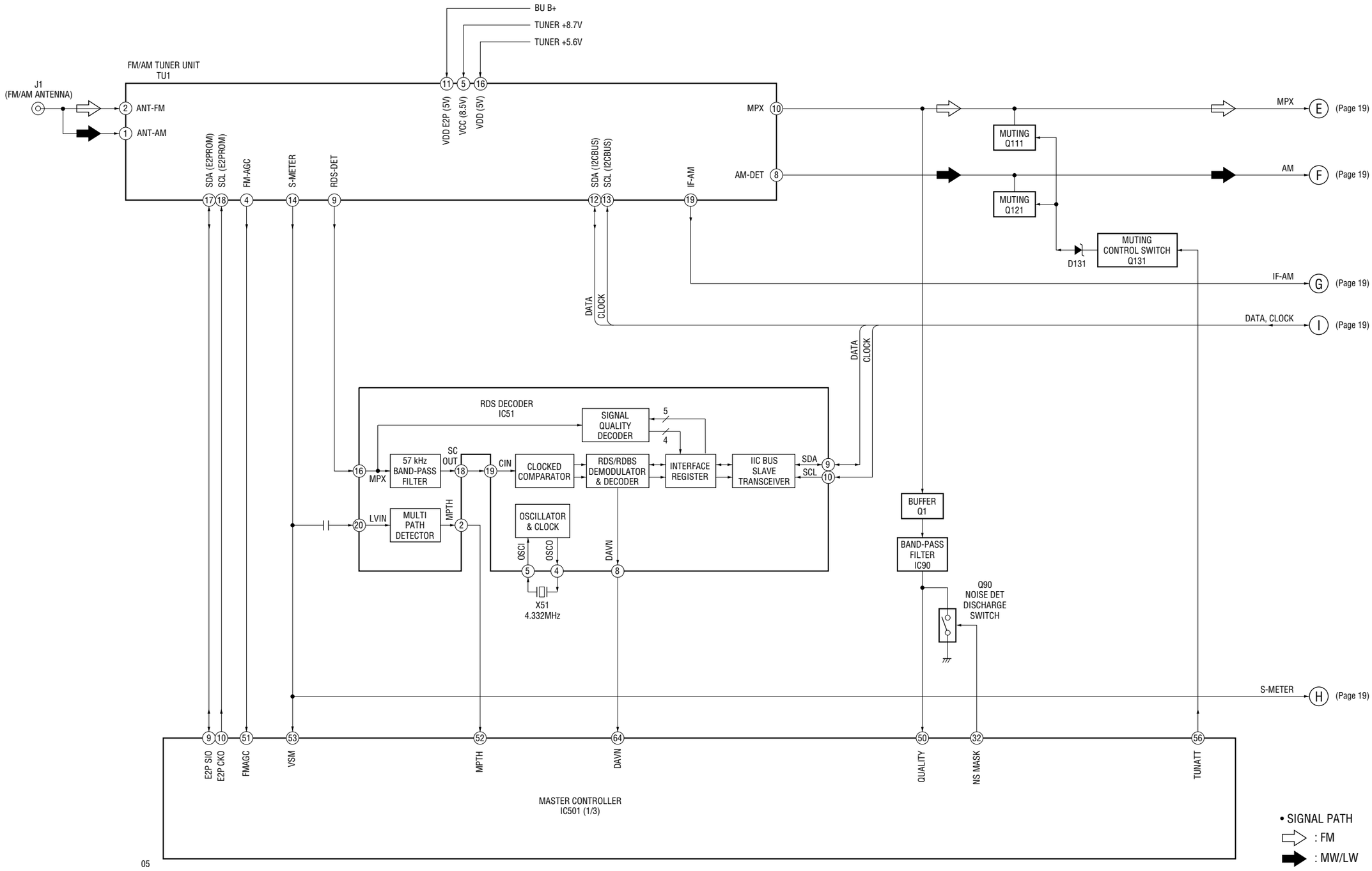
Tuner section adjustments are done automatically in this set.

SECTION 4
DIAGRAMS

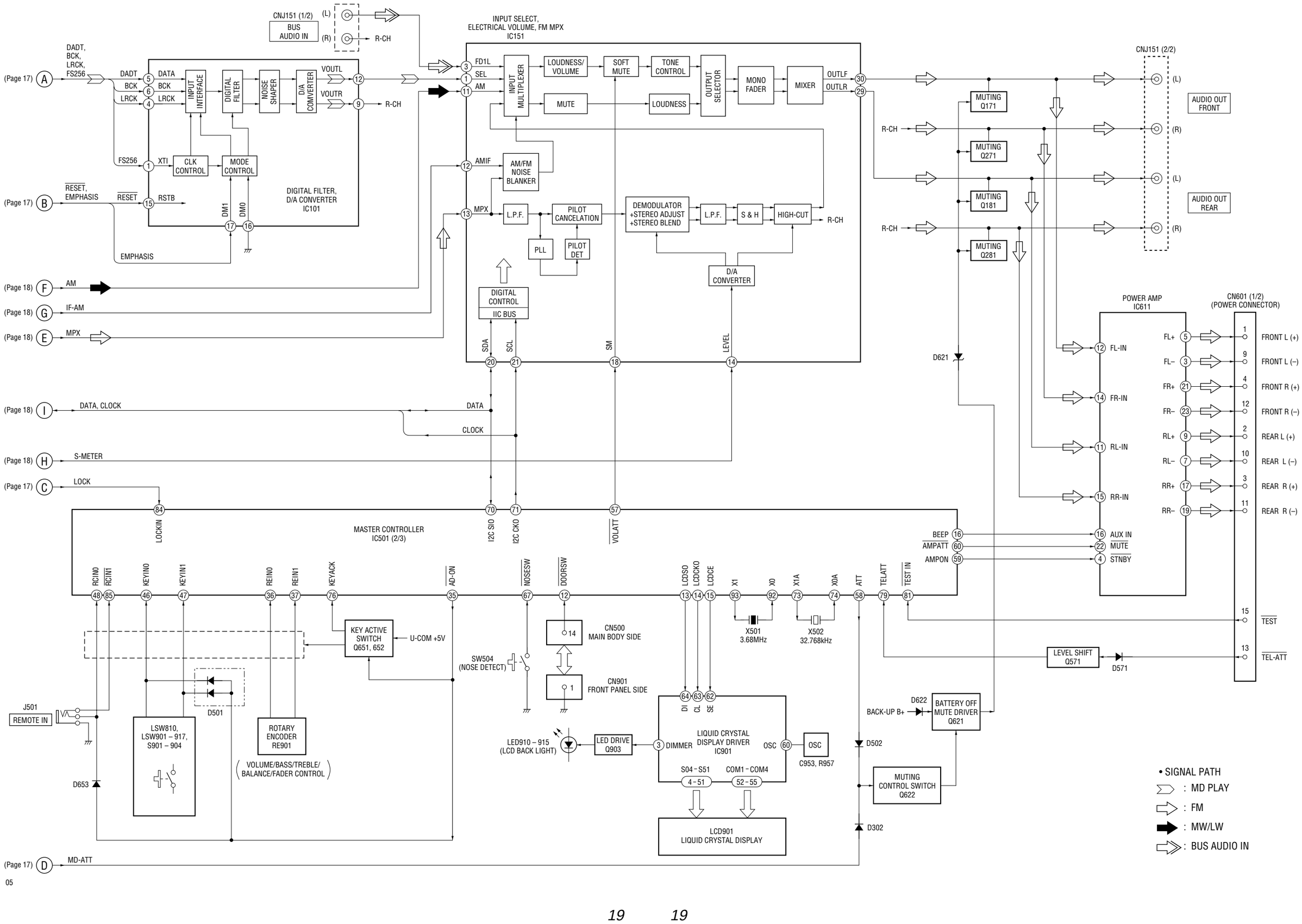
4-1. BLOCK DIAGRAM – SERVO Section –



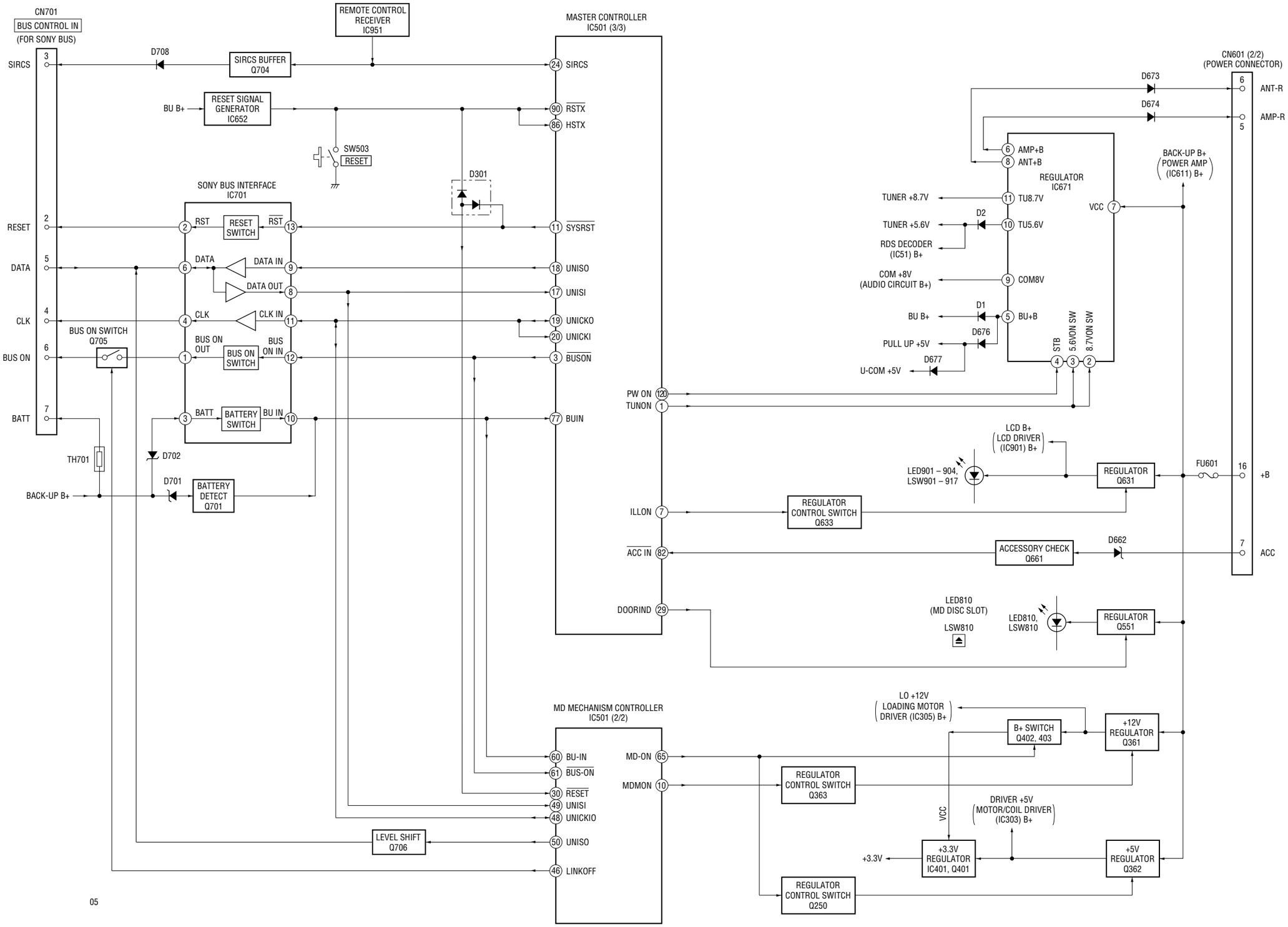
4-2. BLOCK DIAGRAM – TUNER Section –



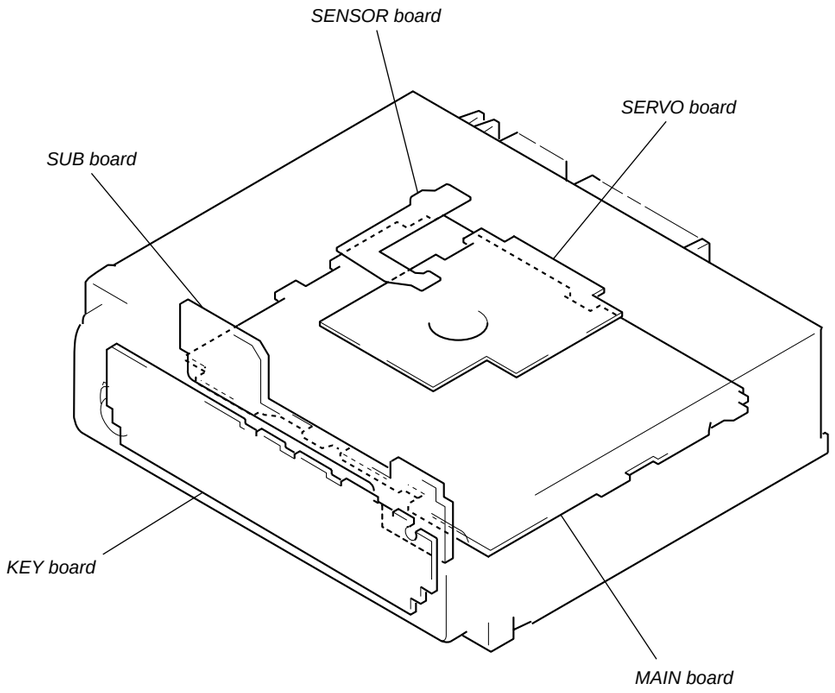
4-3. BLOCK DIAGRAM – MAIN Section –



4-4. BLOCK DIAGRAM – BUS CONTROL/POWER SUPPLY Section –



• **Circuit Boards Location**



4-5. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ● : Through hole.
- △ : internal component.
- ▒▒ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.
- ▭ : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : MD PLAY
  - : FM
  - : MW/LW
  - : BUS AUDIO IN

4-6. PRINTED WIRING BOARDS – SERVO Board (Component Side)/SENSOR Board – • See page 21 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location
D401	A-12
D501	D-11
IC101	B-9
IC301	D-7
IC302	I-9
IC303	F-7
IC304	C-8
IC305	B-13
IC306	E-6
IC401	A-12
IC501	G-13
IC502	D-10
IC503	E-10
Q301	E-5
Q302	I-8
Q401	B-11

【SENSOR BOARD】
(COMPONENT SIDE)

【SENSOR BOARD】
(CONDUCTOR SIDE)

【 SERVO BOARD 】
(COMPONENT SIDE)

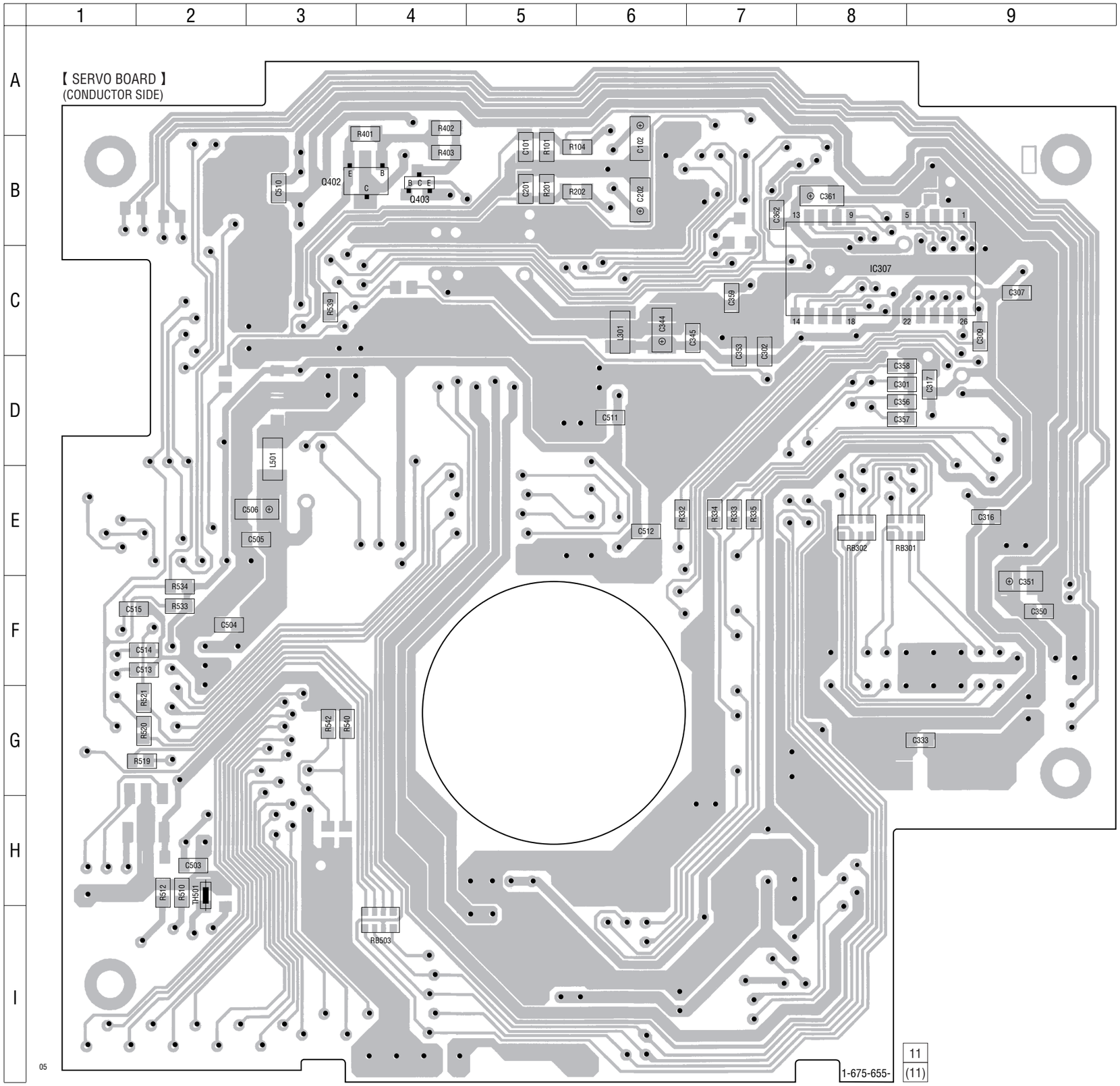
【SENSOR FLEXIBLE BOARD】
1-654-693- 11

1-676-656- 11 (11)

1-675-655- 11 (11)

4-7. PRINTED WIRING BOARD – SERVO Board (Conductor Side) –

• See page 21 for Circuit Boards Location.

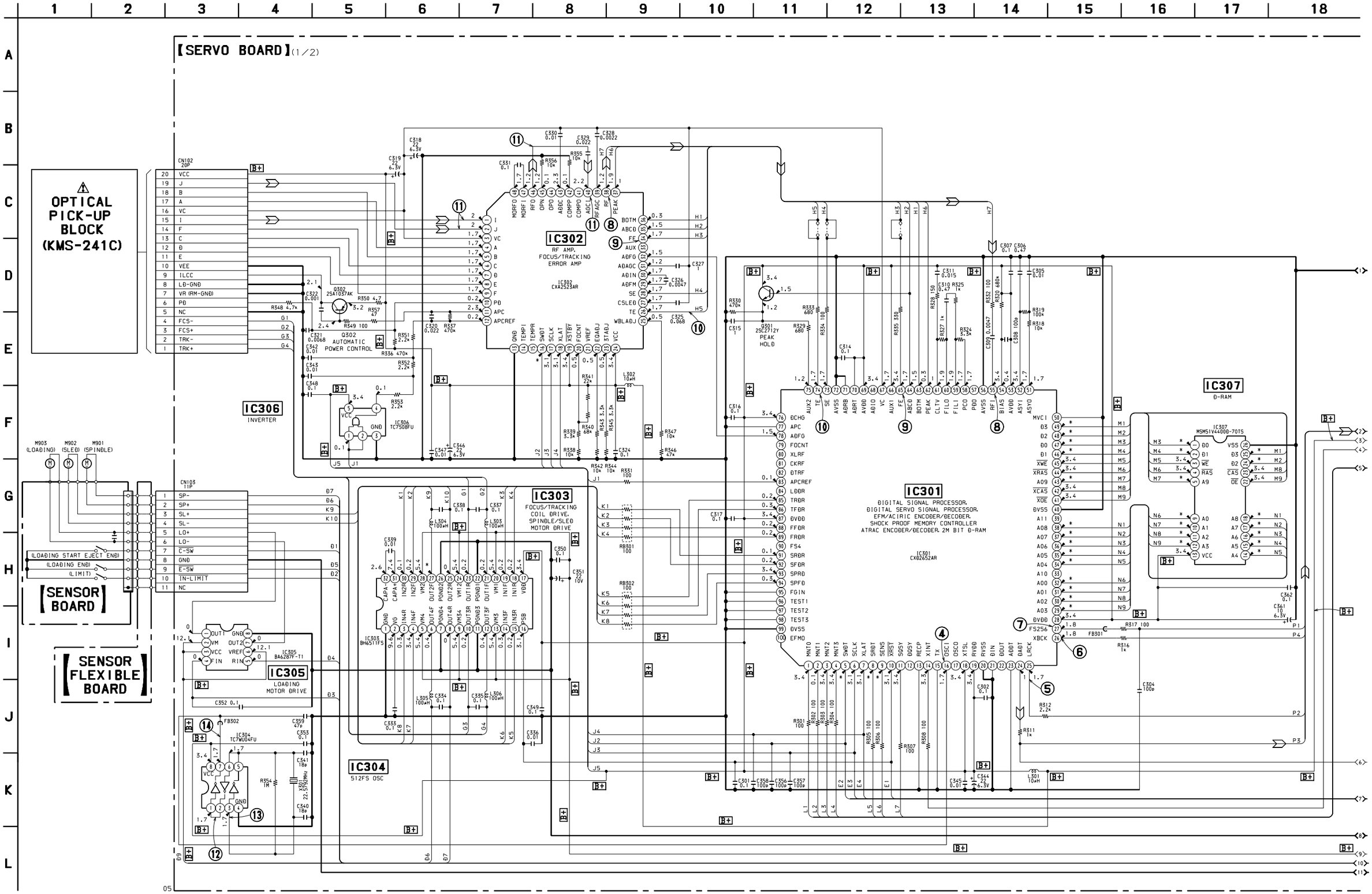


- **Semiconductor Location**

Ref. No.	Location
IC307	C-8
Q402	B-4
Q403	B-4

4-8. SCHEMATIC DIAGRAM – SERVO Board (1/2) –

• See page 31 for Waveforms. • See page 36 for IC Block Diagrams.



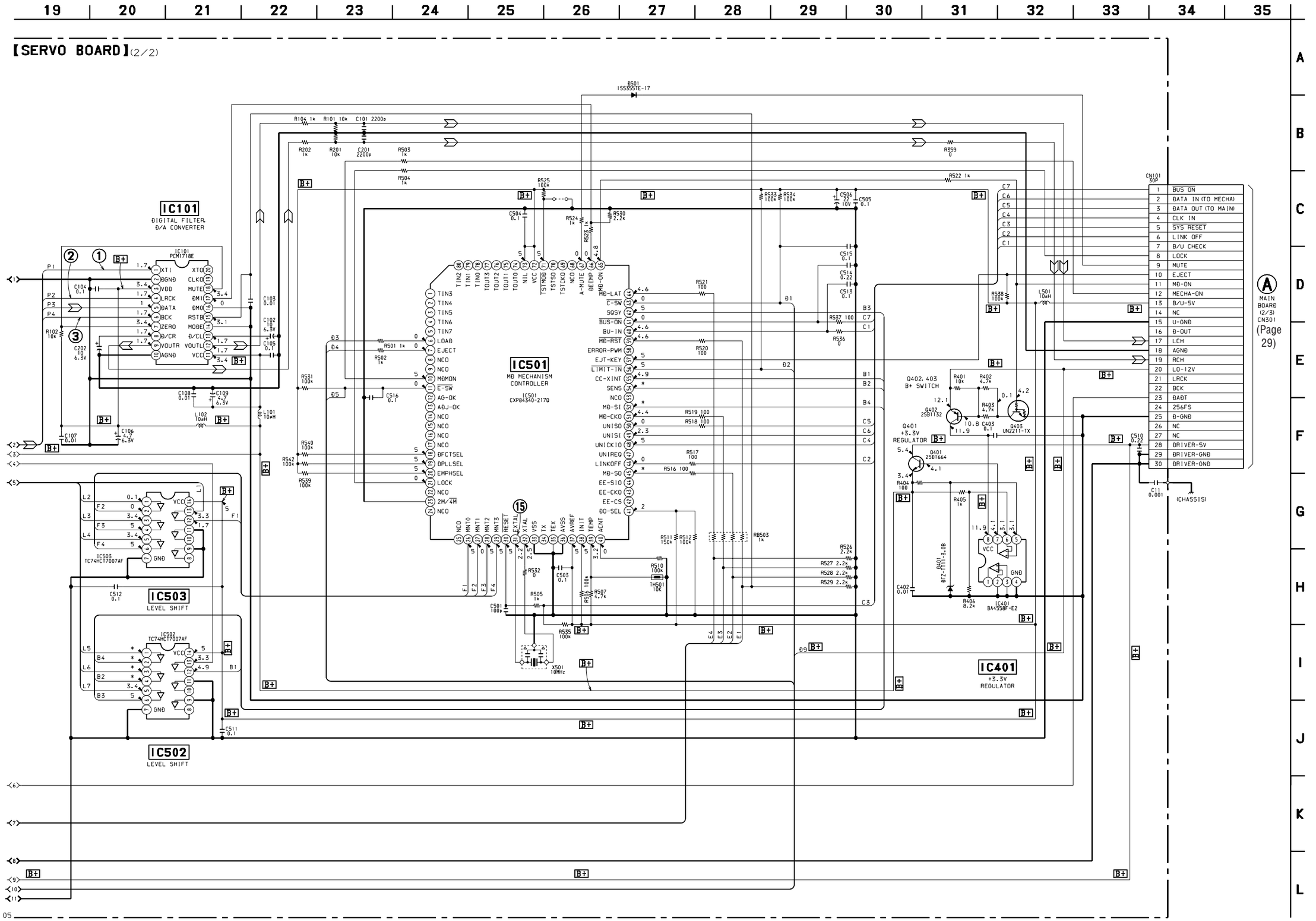
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : MD PLAY
  ∗ : Impossible to measure

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

4-9. SCHEMATIC DIAGRAM – SERVO Board (2/2) –

• See page 31 for Waveforms. • See page 36 for IC Block Diagrams.

【SERVO BOARD】(2/2)



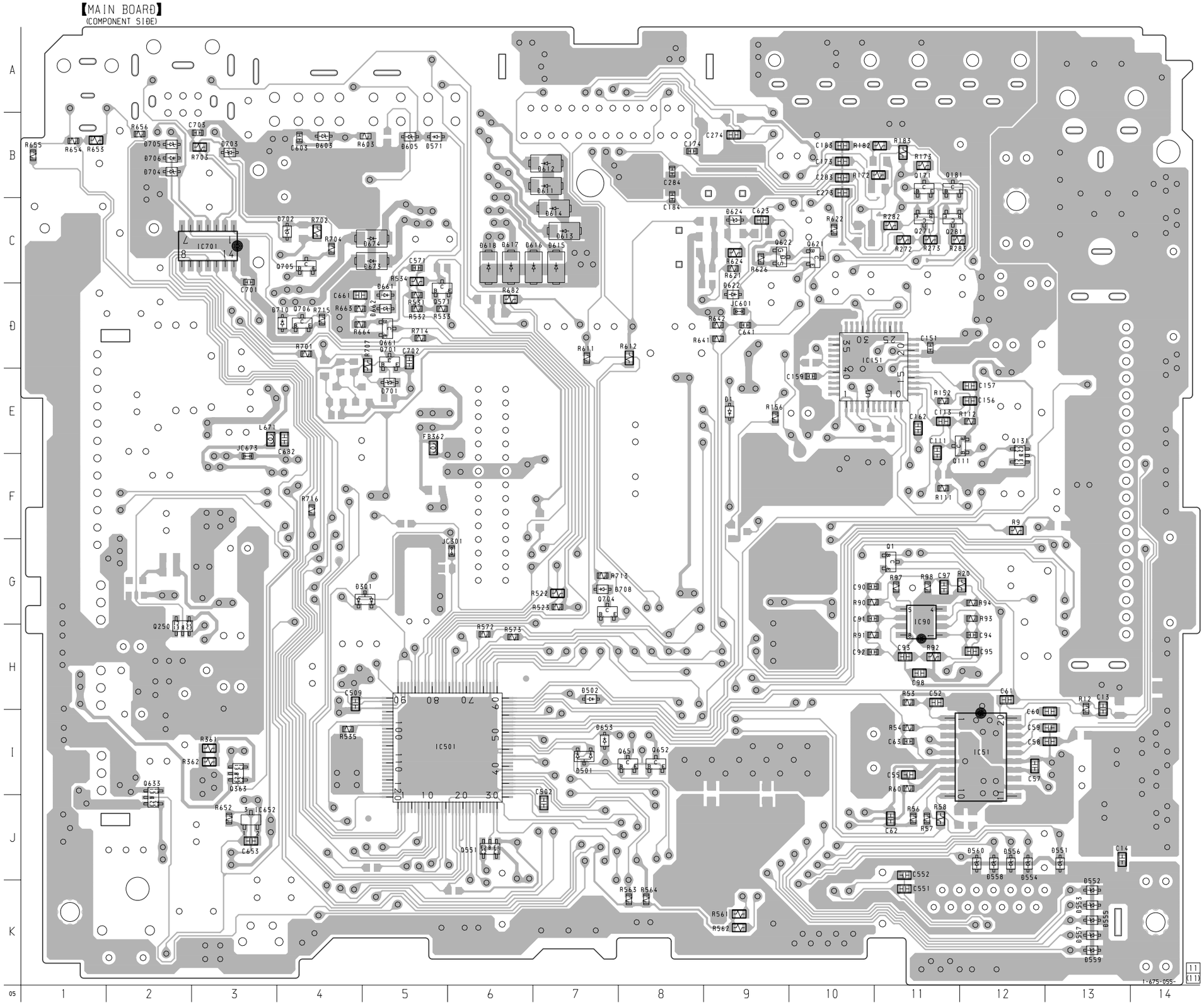
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : MD PLAY
  * : Impossible to measure

4-10. PRINTED WIRING BOARD – MAIN Board (Component Side) –

• See page 21 for Circuit Boards Location.

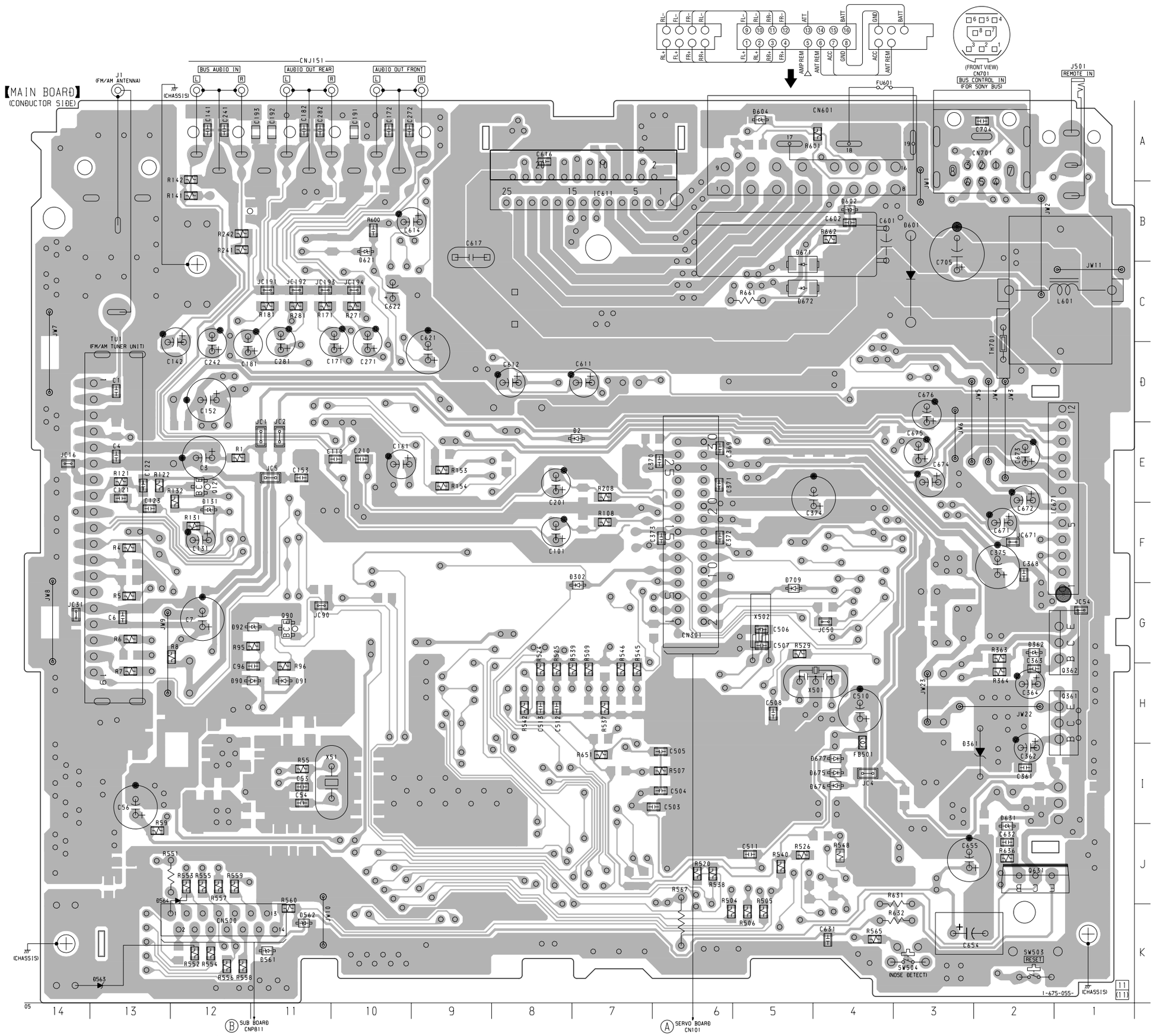
• **Semiconductor Location**

Ref. No.	Location
D1	E-9
D301	G-5
D501	I-7
D502	H-7
D551	J-13
D552	K-13
D553	K-13
D554	J-12
D555	K-13
D556	J-12
D557	K-13
D558	J-12
D559	K-13
D560	J-12
D571	B-5
D603	B-4
D605	B-5
D611	B-7
D612	B-7
D613	C-7
D614	C-7
D615	C-7
D616	C-7
D617	C-6
D618	C-6
D622	D-9
D624	C-9
D653	I-7
D661	D-5
D662	D-5
D673	C-5
D674	C-5
D701	E-5
D702	C-4
D703	B-3
D704	B-2
D705	B-2
D706	B-2
D708	G-7
D710	D-4
IC51	I-12
IC90	G-11
IC151	D-10
IC501	I-5
IC652	J-3
IC701	C-3
Q1	G-11
Q111	E-12
Q131	F-12
Q171	B-11
Q181	B-11
Q250	H-2
Q271	C-11
Q281	C-11
Q363	I-3
Q551	J-6
Q571	D-5
Q621	C-10
Q622	C-9
Q633	J-2
Q651	I-8
Q652	I-8
Q661	D-5
Q701	D-5
Q704	G-7
Q705	C-4
Q706	D-4



4-11. PRINTED WIRING BOARD – MAIN Board (Conductor Side) –

• See page 21 for Circuit Boards Location.

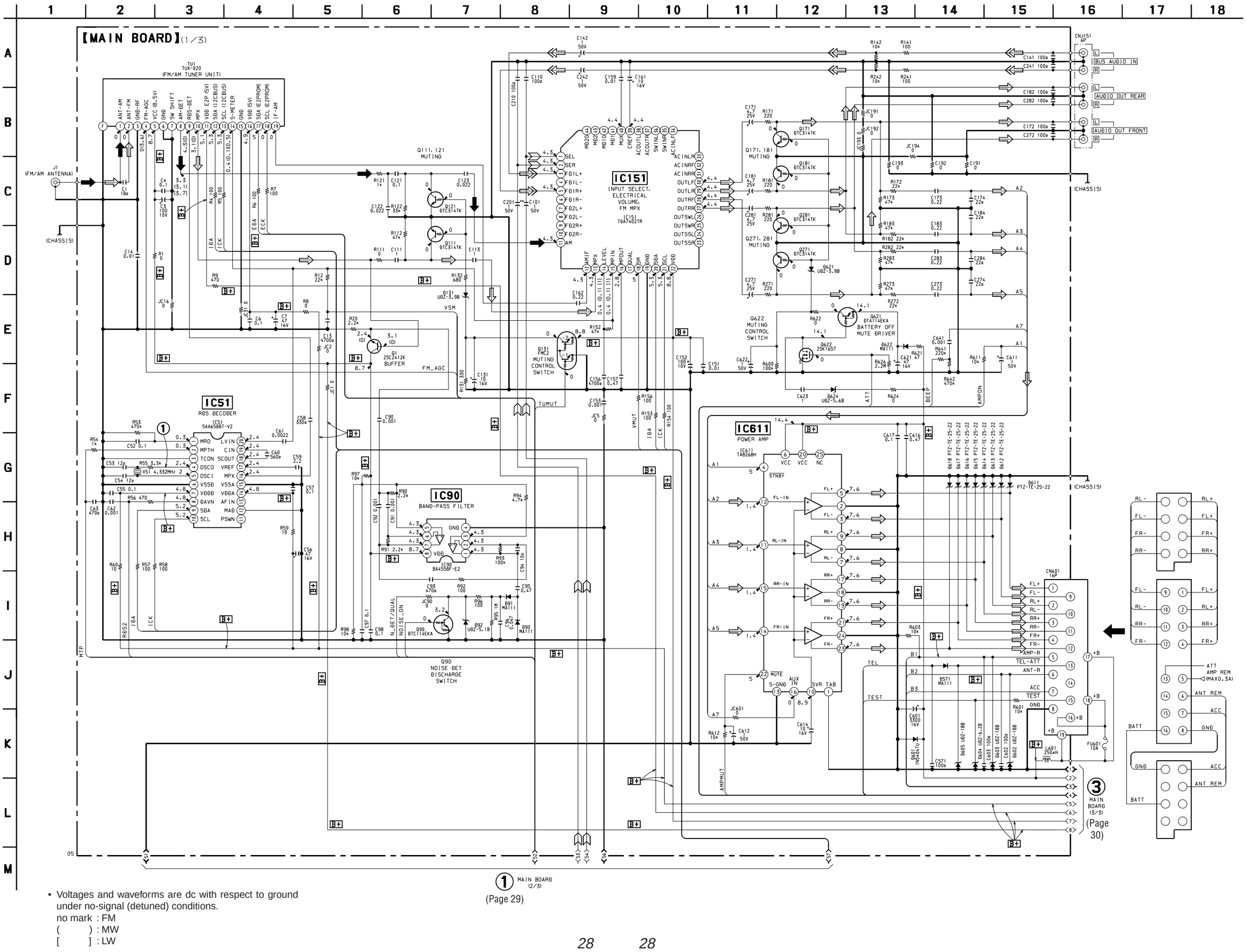


- **Semiconductor Location**

Ref. No.	Location
D2	E-7
D90	H-11
D91	H-11
D92	G-11
D131	F-12
D302	G-7
D361	I-2
D362	G-2
D561	K-11
D562	K-11
D563	K-13
D564	K-12
D601	C-3
D602	B-4
D604	A-5
D621	B-10
D631	J-2
D671	C-5
D672	C-5
D675	I-4
D676	I-4
D677	I-4
D709	G-5
IC611	A-7
IC671	F-1
Q90	G-11
Q121	E-12
Q361	H-1
Q362	G-1
Q631	J-2

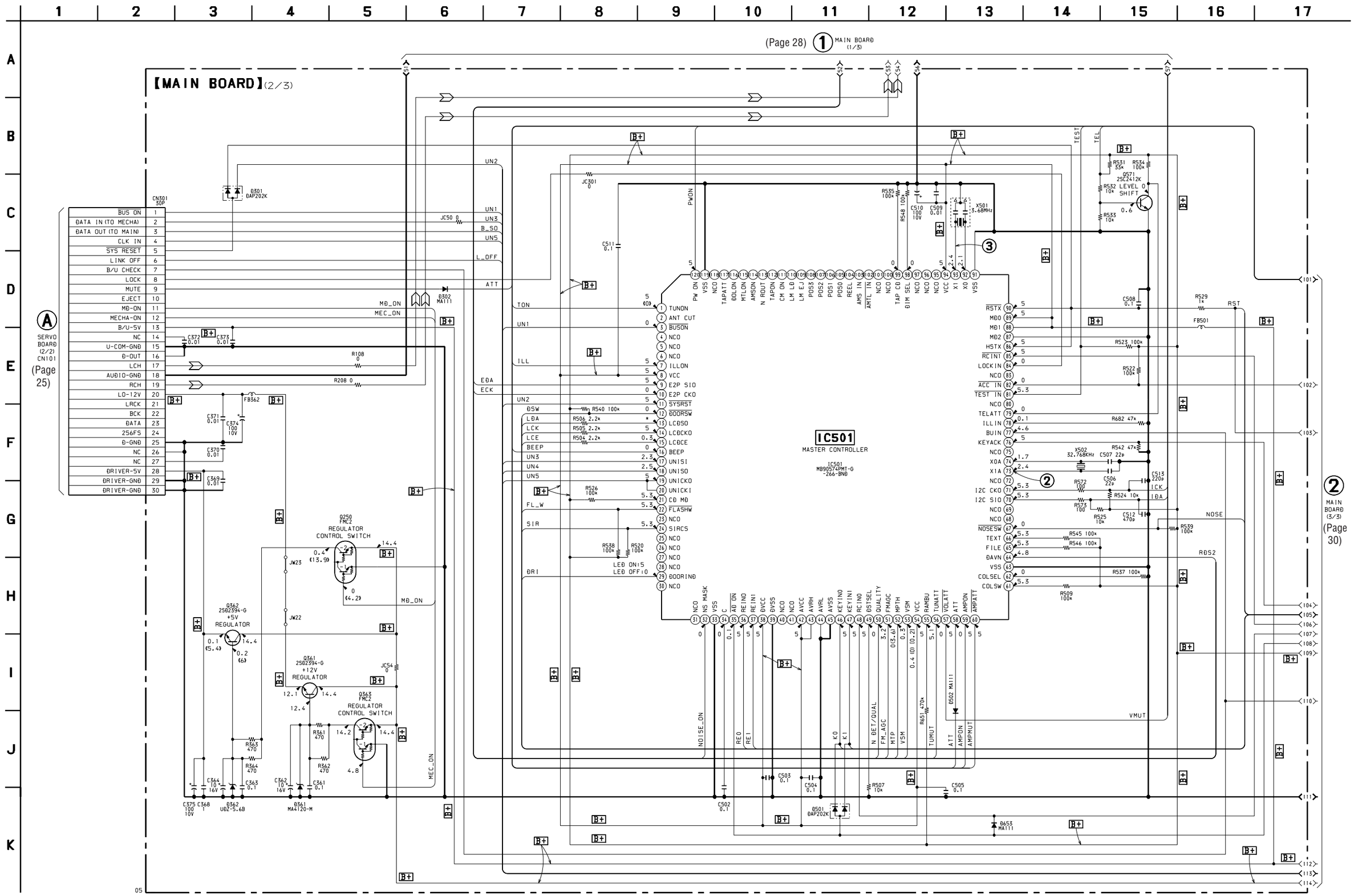
4-12. SCHEMATIC DIAGRAM – MAIN Board (1/3) –

• See page 31 for Waveforms. • See page 36 for IC Block Diagrams.



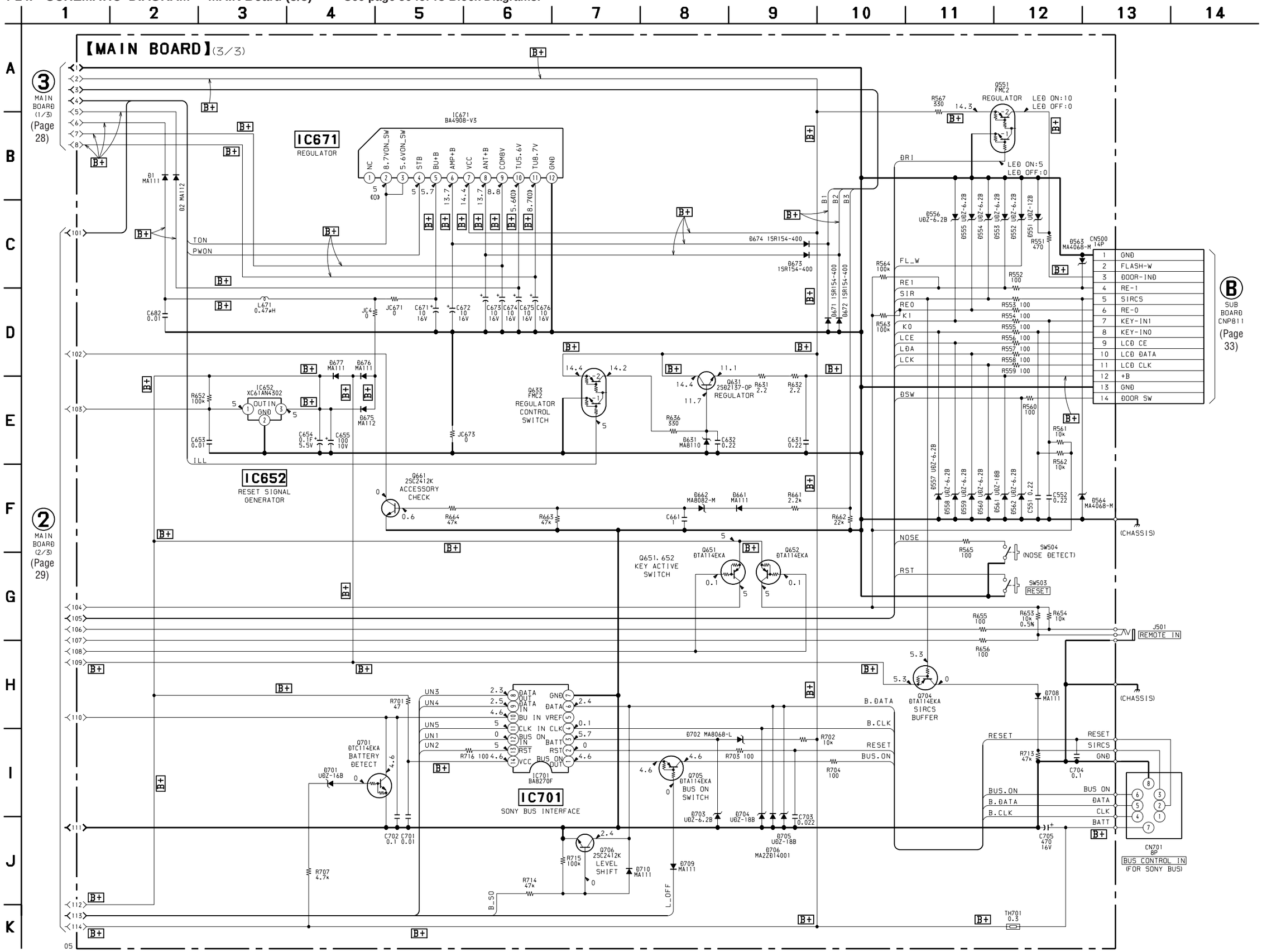
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : MW
  [ ] : LW

4-13. SCHEMATIC DIAGRAM – MAIN Board (2/3) – • See page 31 for Waveforms.



- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : MW
  [ ] : LW
  ⟨⟨ ⟩⟩ : MD PLAY
  * : Impossible to measure

4-14. SCHEMATIC DIAGRAM – MAIN Board (3/3) – • See page 36 for IC Block Diagrams.

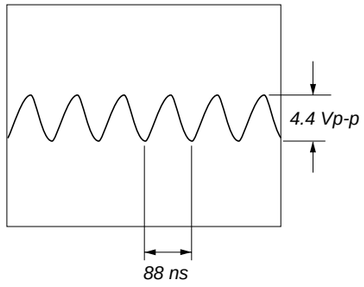


- Voltages are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ⟨⟨ ⟩⟩ : MD PLAY

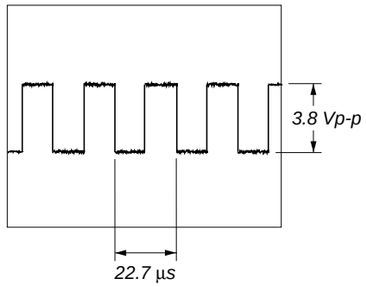
• **Waveforms**

– SERVO Board –

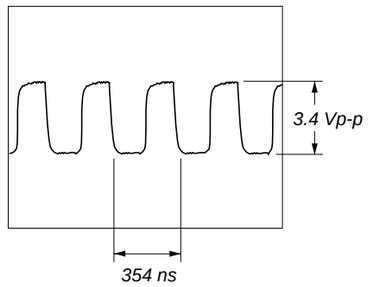
❶ IC101 ① (XTI) (MD Play Mode)



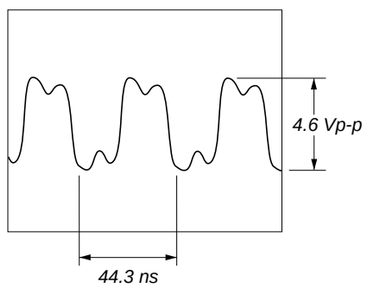
❷ IC101 ④ (LRCK) (MD Play Mode)



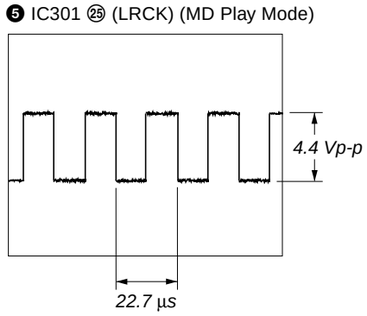
❸ IC101 ⑥ (BCK) (MD Play Mode)



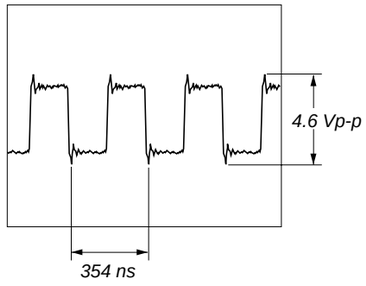
❹ IC301 ⑯ (OSCI) (MD Play Mode)



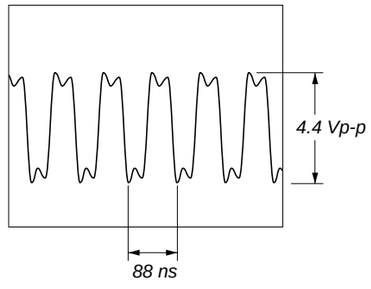
❺ IC301 ㉕ (LRCK) (MD Play Mode)



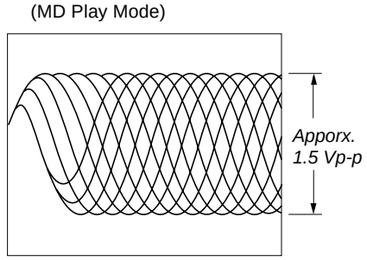
❻ IC301 ㉖ (XBCK) (MD Play Mode)



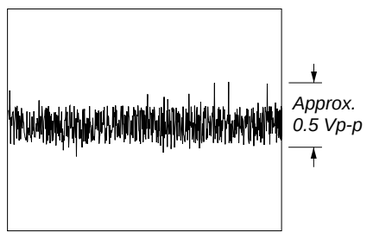
❼ IC301 ㉗ (FS256) (MD Play Mode)



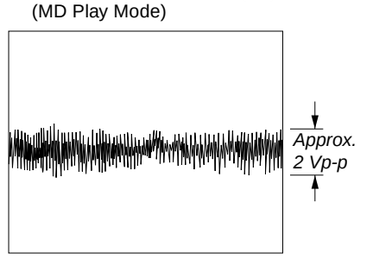
❽ IC301 ㊺ (RFI), IC302 ㊳ (RF) (MD Play Mode)



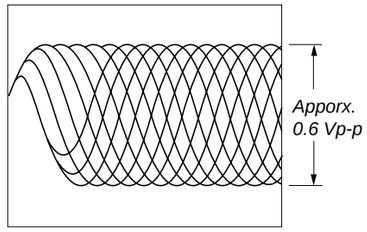
❾ IC301 ㊺ (FE), IC302 ㉞ (FE) (MD Play Mode)



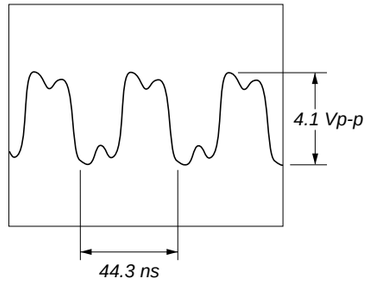
❿ IC301 ㉞ (TE), IC302 ㉖ (TE) (MD Play Mode)



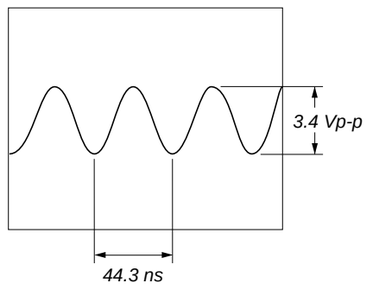
⓫ IC302 ①, ②, ㊵, ㊻ (I, J, AGCI, RFO) (MD Play Mode)



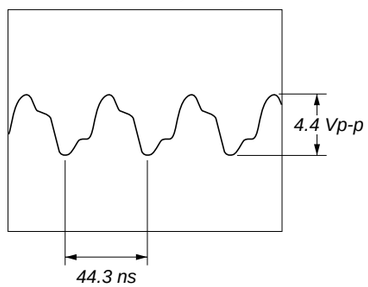
⓬ IC304 ①, ② (MD Play Mode)



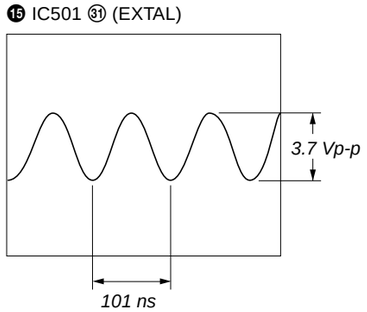
⓭ IC304 ③ (MD Play Mode)



⓮ IC304 ⑦ (MD Play Mode)

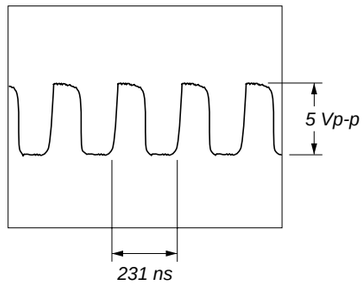


⓯ IC501 ㉛ (EXTAL)

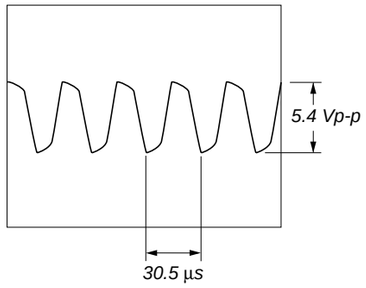


– MAIN Board –

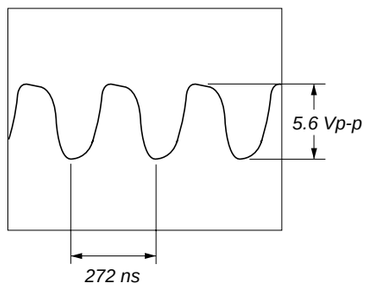
❶ IC51 ④ (OSCO)



❷ IC501 ㉝ (X1A)

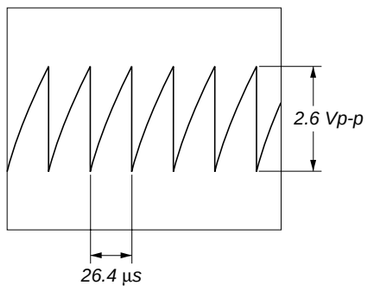


❸ IC501 ㉝ (X1)

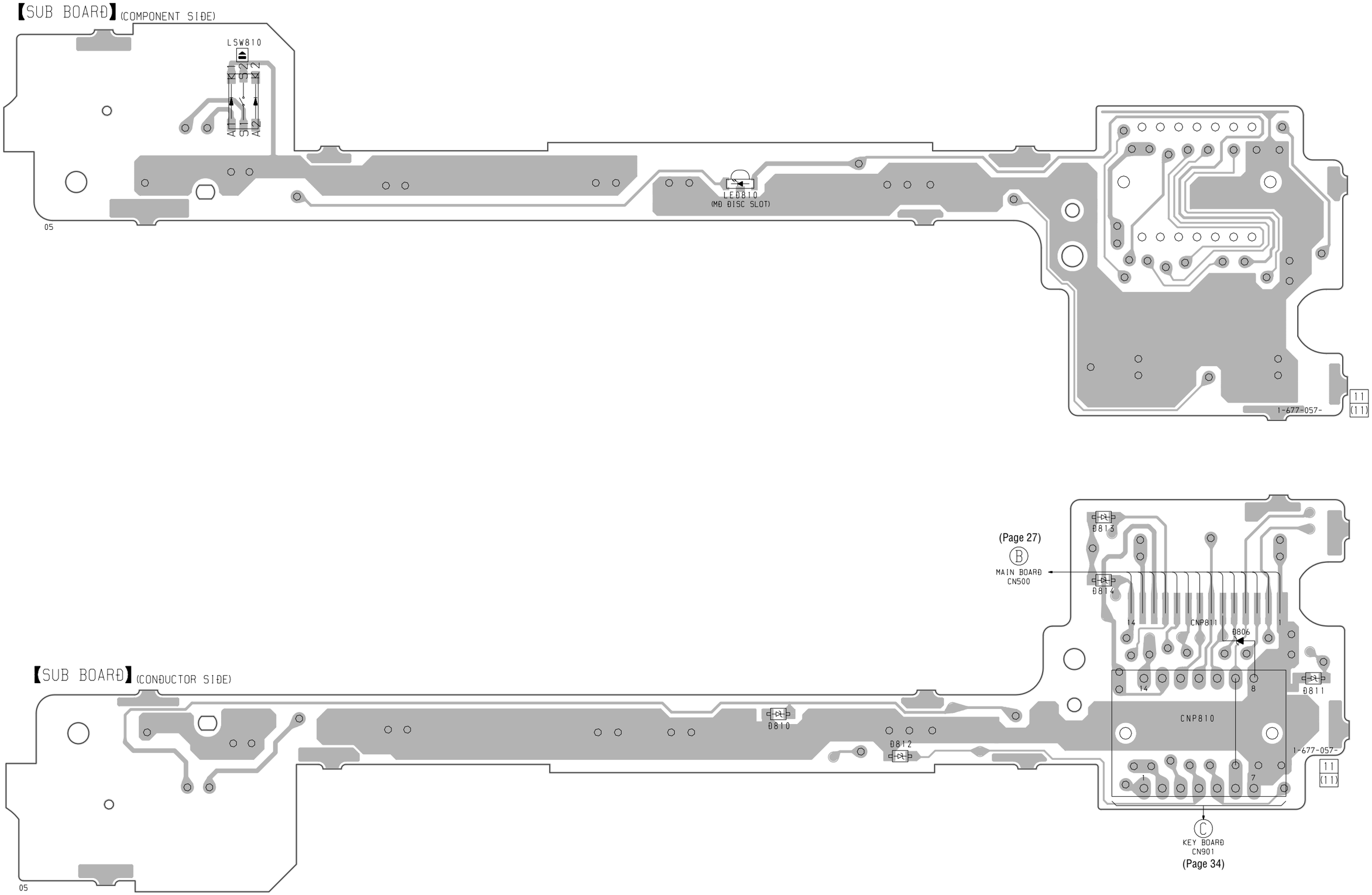


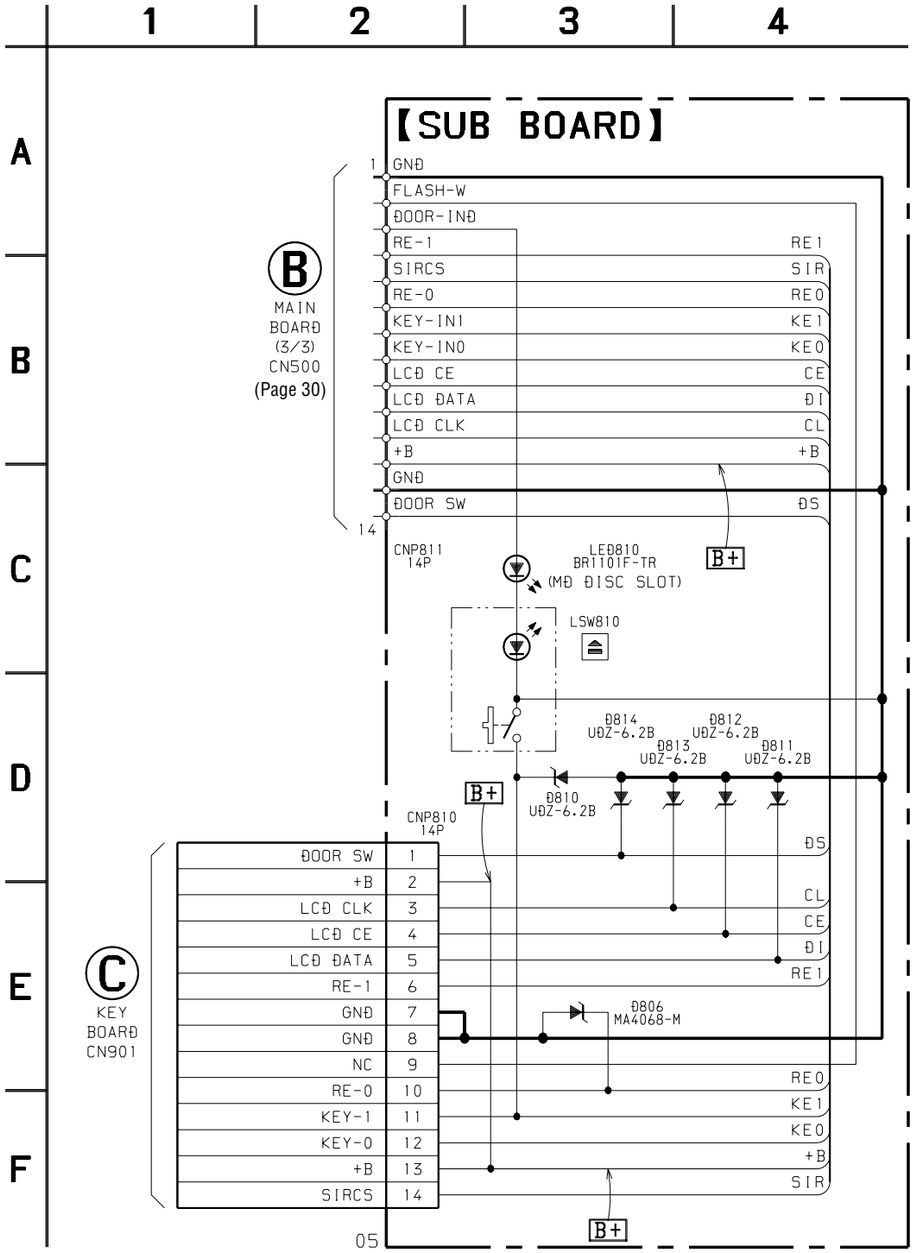
– KEY Board –

❶ IC901 ㊿ (OSC)



4-15. PRINTED WIRING BOARD – SUB Board – **• See page 21 for Circuit Boards Location.**

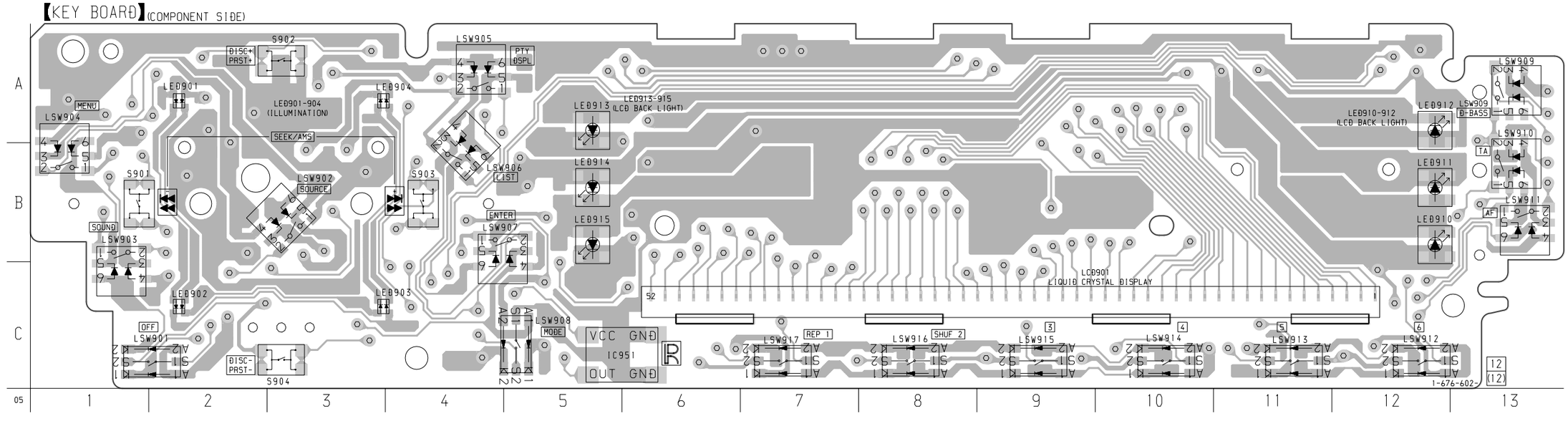



1
2
3
4
A
B
C
D
E
F
【SUB BOARD】
B
MAIN BOARD (3/3) CN500 (Page 30)
1 GND
FLASH-W
DOOR-IND
RE-1
SIRCS
RE-0
KEY-IN1
KEY-IN0
LCD CE
LCD DATA
LCD CLK
+B
GND
DOOR SW
14
RE1
SIR
RE0
KE1
KE0
CE
DI
CL
+B
DS
CNP811 14P
LED810 BR1101F-TR (MD DISC SLOT)
B+
LSW810
D814 UDZ-6.2B
D812 UDZ-6.2B
D813 UDZ-6.2B
D811 UDZ-6.2B
D810 UDZ-6.2B
CNP810 14P
C
KEY BOARD CN901
DOOR SW 1
+B 2
LCD CLK 3
LCD CE 4
LCD DATA 5
RE-1 6
GND 7
GND 8
NC 9
RE-0 10
KEY-1 11
KEY-0 12
+B 13
SIRCS 14
D806 MA4068-M
05

4-17. PRINTED WIRING BOARD – KEY Board – • See page 21 for Circuit Boards Location.

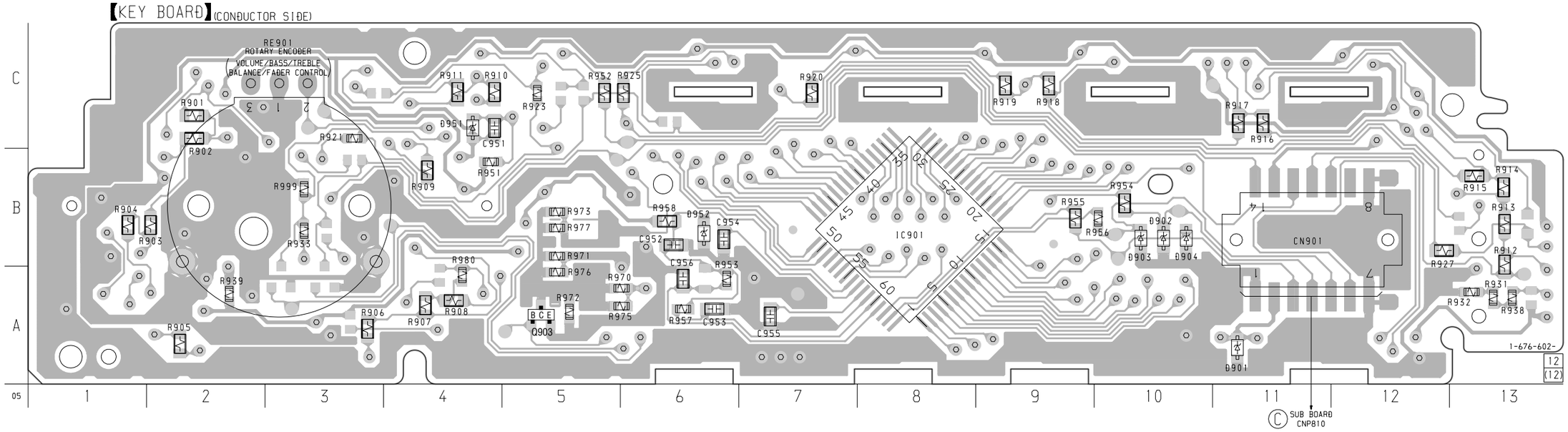
• **Semiconductor Location (Component Side)**

Ref. No.	Location
IC951	C-5
LED901	A-2
LED902	C-2
LED903	C-3
LED904	A-3
LED910	B-12
LED911	B-12
LED912	A-12
LED913	A-5
LED914	B-5
LED915	B-5

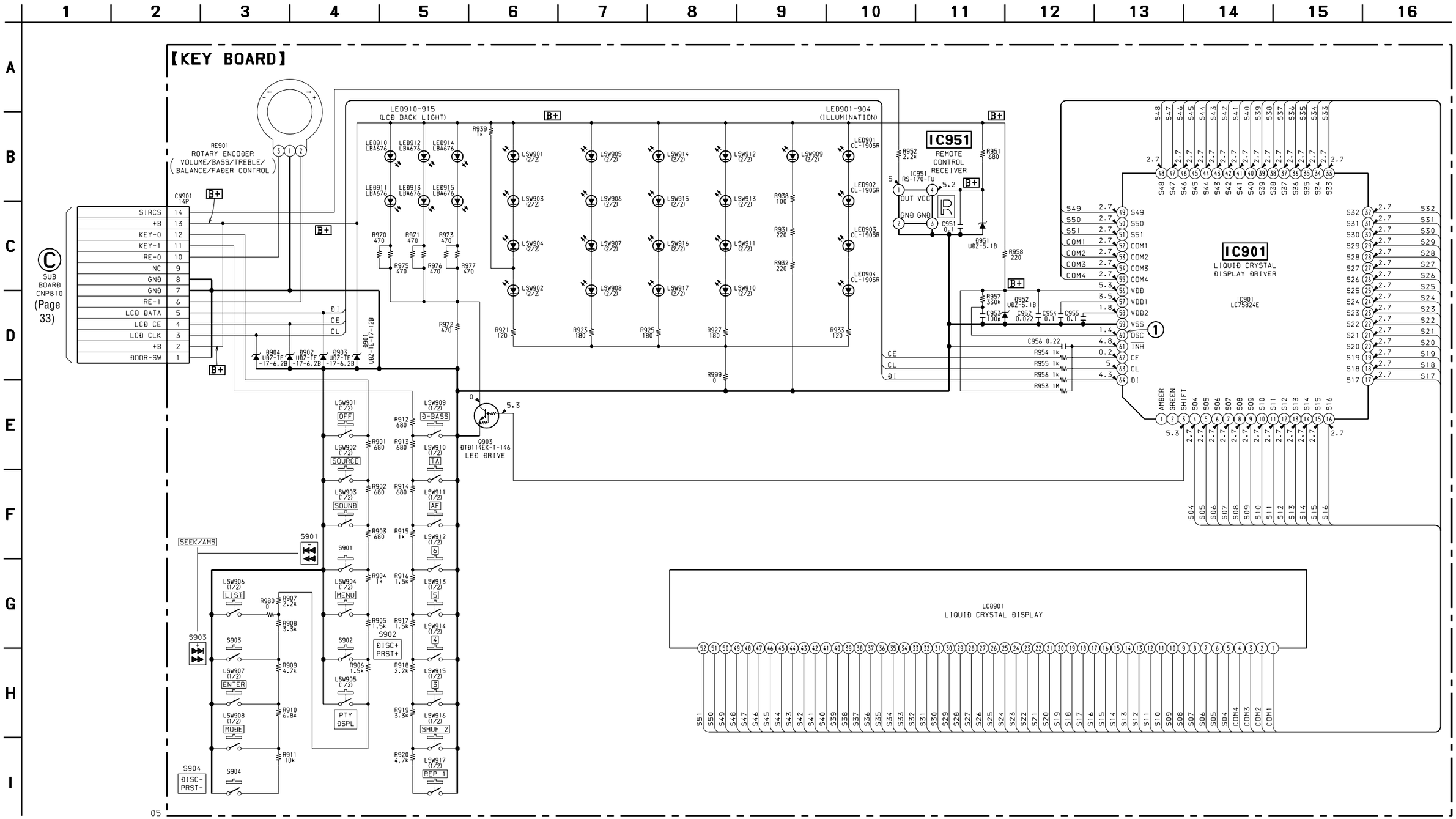


• **Semiconductor Location (Conductor Side)**

Ref. No.	Location
D901	A-11
D902	B-10
D903	B-10
D904	B-10
D951	C-4
D952	B-6
IC901	B-8
Q903	A-5



(Page 32)

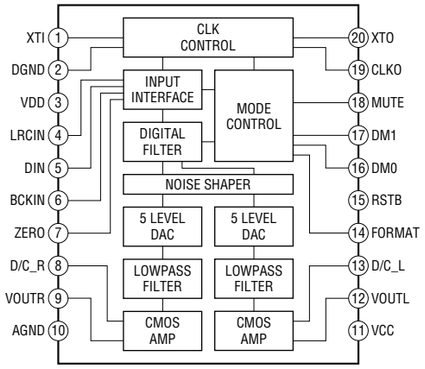


- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM

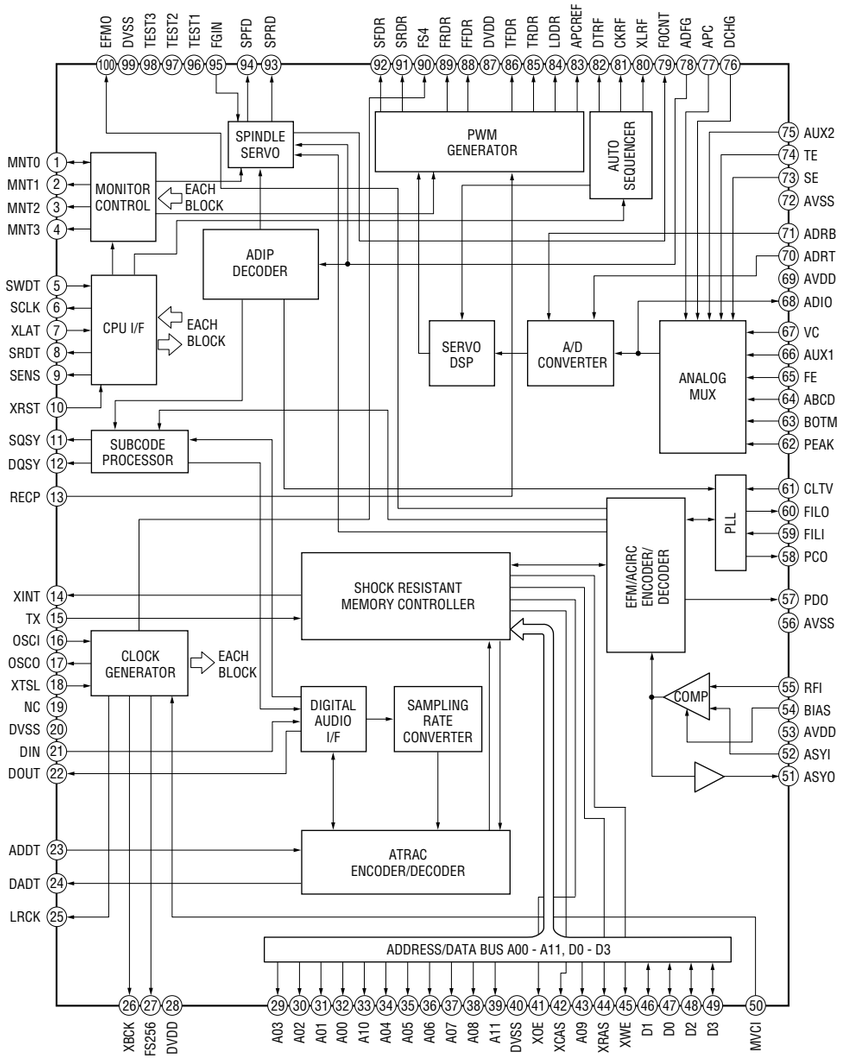
• **IC Block Diagrams**

– SERVO Board –

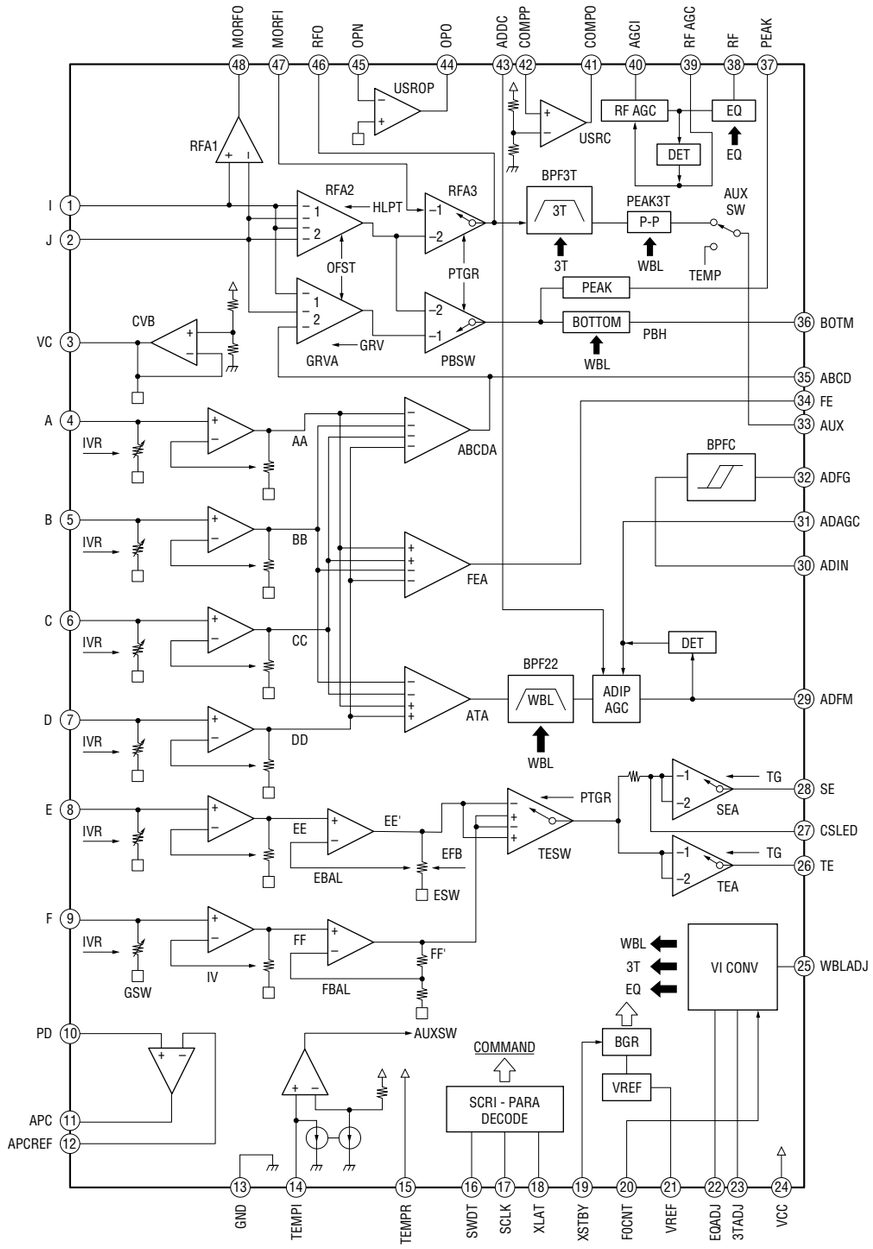
IC101 PCM1718E/2K



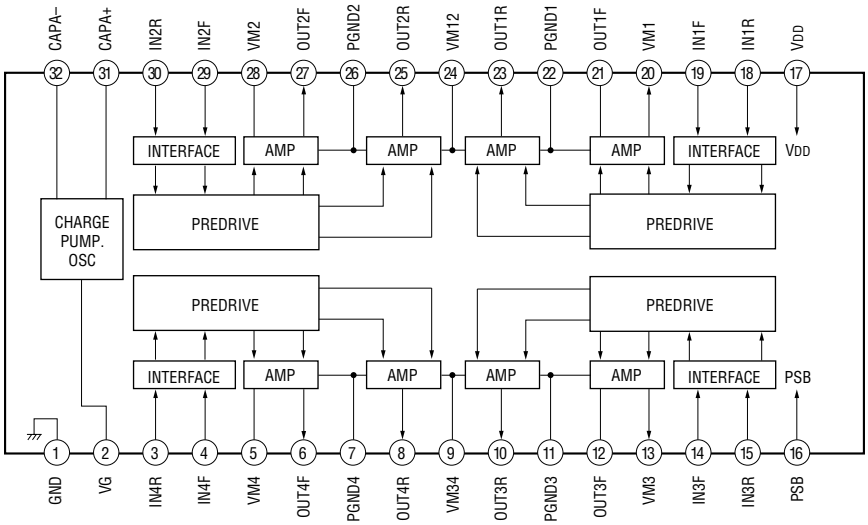
IC301 CXD2652AR



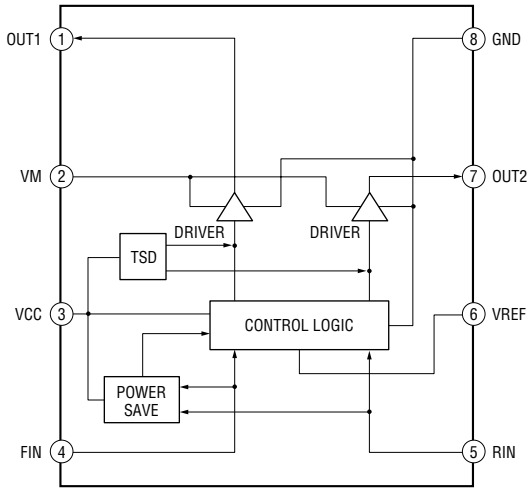
IC302 CXA2523AR



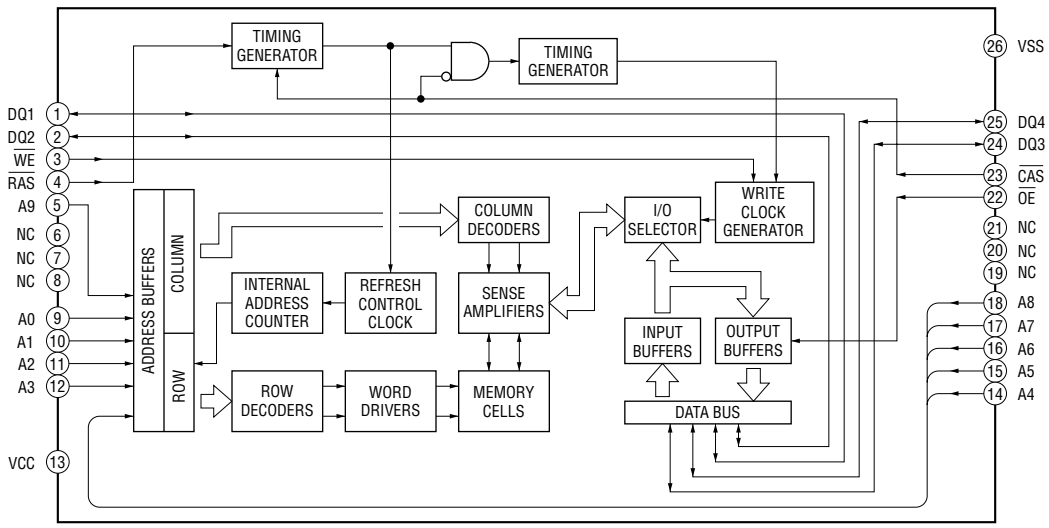
IC303 BH6511FS



IC305 BA6287F

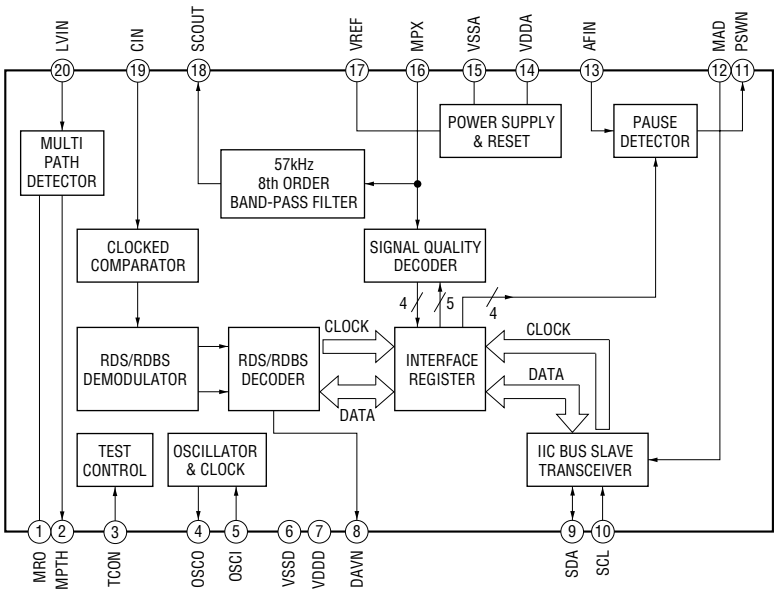


IC307 MN41V4400TT-08S

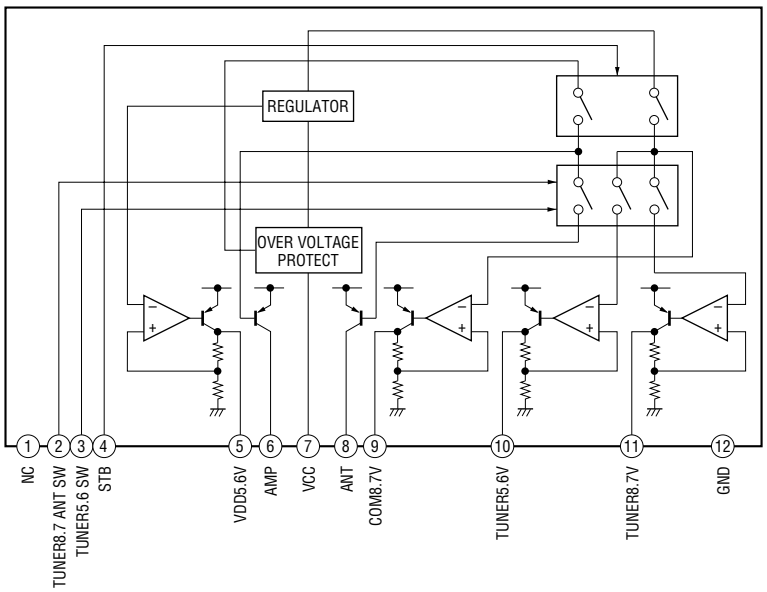


– MAIN Board –

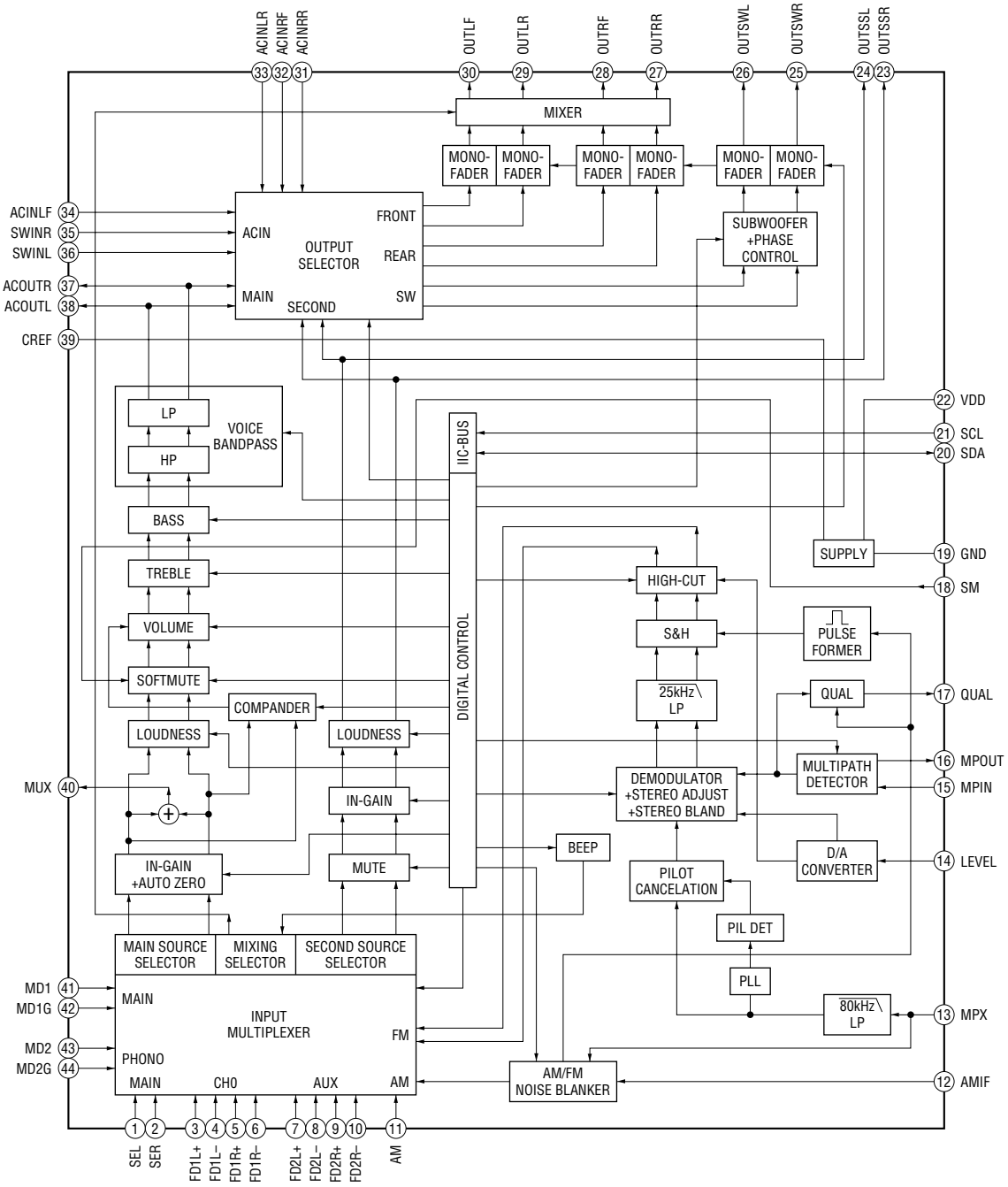
IC51 SAA6588T/V2-118



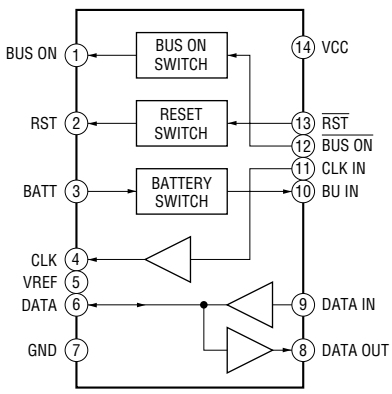
IC671 BA4908-V3



IC151 TDA7402TR



IC701 BA8270F-E2



4-19. IC PIN FUNCTION DESCRIPTION

- **SERVO BOARD IC301 CXD2652AR**
  (DIGITAL SIGNAL PROCESSOR, DIGITAL SERVO PROCESSOR, EFM/ACIRC ENCODER/DECODER, SHOCK PROOF MEMORY CONTROLLER, ATRAC ENCODER/DECODER, 2M BIT D-RAM)

Pin No.	Pin Name	I/O	Description
1	MNT0	O	Focus OK signal output to the MD mechanism controller (IC501) "H" is output when focus is on ("L": NG)
2	MNT1	O	Track jump detection signal output to the MD mechanism controller (IC501)
3	MNT2	O	Busy monitor signal output to the MD mechanism controller (IC501)
4	MNT3	O	Spindle servo lock status monitor signal output to the MD mechanism controller (IC501)
5	SWDT	I	Writing serial data signal input from the MD mechanism controller (IC501)
6	SCLK	I	Serial data transfer clock signal input from the MD mechanism controller (IC501)
7	XLAT	I	Serial data latch pulse signal input from the MD mechanism controller (IC501)
8	SRDT	O (3)	Reading serial data signal output to the MD mechanism controller (IC501)
9	SENS	O (3)	Internal status (SENSE) output to the MD mechanism controller (IC501)
10	$\overline{\text{XRST}}$	I	Reset signal input from the MD mechanism controller (IC501) "L": reset
11	SQSY	O	Subcode Q sync (SCOR) output to the MD mechanism controller (IC501) "L" is output every 13.3 msec Almost all, "H" is output
12	DQSY	O	Digital In U-bit CD format subcode Q sync (SCOR) output terminal "L" is output every 13.3 msec Almost all, "H" is output Not used (open)
13	RECP	I	Laser power selection signal input terminal "L": playback mode, "H": recording mode (fixed at "L" in this set)
14	XINT	O	Interrupt status output to the MD mechanism controller (IC501)
15	TX	I	Recording data output enable signal input terminal Writing data transmission timing input (Also serves as the magnetic head on/off output) Not used (fixed at "L")
16	OSCI	I	System clock signal (512Fs=22.5792 MHz) input from the oscillator circuit
17	OSCO	O	System clock signal (512Fs=22.5792 MHz) output terminal Not used (open)
18	XTSL	I	Input terminal for the system clock frequency setting "L": 45.1584 MHz, "H": 22.5792 MHz (fixed at "H" in this set)
19	RVDD	—	Power supply terminal (+3.3V) (digital system)
20	RVSS	—	Ground terminal (digital system)
21	DIN	I	Digital audio signal input terminal when recording mode Not used (fixed at "L")
22	DOUT	O	Digital audio signal output terminal when playback mode Not used (open)
23	ADDT	I	Recording data input terminal Not used (fixed at "L")
24	DADT	O	Playback data output to the PCM1718E (IC101)
25	LRCK	O	L/R sampling clock signal (44.1 kHz) output to the PCM1718E (IC101)
26	XBCK	O	Bit clock signal (2.8224 MHz) output to the PCM1718E (IC101)
27	FS256	O	Clock signal (11.2896 MHz) output to the PCM1718E (IC101)
28	DVDD	—	Power supply terminal (+3.3V) (digital system)
29 to 32	A03 to A00	O	Address signal output to the D-RAM (IC307)
33	A10	O	Address signal output to the external D-RAM Not used (open)
34 to 38	A04 to A08	O	Address signal output to the D-RAM (IC307)
39	A11	O	Address signal output to the external D-RAM Not used (open)
40	DVSS	—	Ground terminal (digital system)
41	$\overline{\text{XOE}}$	O	Output enable signal output to the D-RAM (IC307) "L" active
42	$\overline{\text{XCAS}}$	O	Column address strobe signal output to the D-RAM (IC307) "L" active
43	A09	O	Address signal output to the D-RAM (IC307)
44	$\overline{\text{XRAS}}$	O	Row address strobe signal output to the D-RAM (IC307) "L" active
45	$\overline{\text{XWE}}$	O	Write enable signal output to the D-RAM (IC307) "L" active

Pin No.	Pin Name	I/O	Description
46	D1	I/O	Two-way data bus with the D-RAM (IC307)
47	D0	I/O	
48	D2	I/O	
49	D3	I/O	
50	MVCI	I	Digital in PLL oscillation input from the external VCO Not used (fixed at “L”)
51	ASYO	O	Playback EFM full-swing output terminal
52	ASYI	I (A)	Playback EFM asymmetry comparator voltage input terminal
53	AVDD	—	Power supply terminal (+3.3V) (analog system)
54	BIAS	I (A)	Playback EFM asymmetry circuit constant current input terminal
55	RFI	I (A)	Playback EFM RF signal input from the CXA2523AR (IC302)
56	AVSS	—	Ground terminal (analog system)
57	PDO	O (3)	Phase comparison output for clock playback analog PLL of the playback EFM Not used (open)
58	PCO	O (3)	Phase comparison output for master clock of the recording/playback EFM master PLL
59	FILI	I (A)	Filter input for master clock of the recording/playback master PLL
60	FILO	O (A)	Filter output for master clock of the recording/playback master PLL
61	CLTV	I (A)	Internal VCO control voltage input of the recording/playback master PLL
62	PEAK	I (A)	Light amount signal (RF/ABCD) peak hold input from the CXA2523AR (IC302)
63	BOTM	I (A)	Light amount signal (RF/ABCD) bottom hold input from the CXA2523AR (IC302)
64	ABCD	I (A)	Light amount signal (ABCD) input from the CXA2523AR (IC302)
65	FE	I (A)	Focus error signal input from the CXA2523AR (IC302)
66	AUX1	I (A)	Auxiliary signal (I_3 signal/temperature signal) input terminal Not used (fixed at “H”)
67	VC	I (A)	Middle point voltage (+1.65V) input from the CXA2523AR (IC302)
68	ADIO	O (A)	Monitor output of the A/D converter input signal Not used (open)
69	AVDD	—	Power supply terminal (+3.3V) (analog system)
70	ADRT	I (A)	A/D converter operational range upper limit voltage input terminal (fixed at “H” in this set)
71	ADRB	I (A)	A/D converter operational range lower limit voltage input terminal (fixed at “L” in this set)
72	AVSS	—	Ground terminal (analog system)
73	SE	I (A)	Sled error signal input from the CXA2523AR (IC302)
74	TE	I (A)	Tracking error signal input from the CXA2523AR (IC302)
75	AUX2	I (A)	Auxiliary signal input terminal Light amount signal input from the CXA2523AR (IC302)
76	DCHG	I (A)	Connected to the +3.3V power supply
77	APC	I (A)	Error signal input for the laser automatic power control Not used (fixed at “L”)
78	ADFG	I	ADIP duplex FM signal (22.05 kHz ± 1 kHz) input from the CXA2523AR (IC302)
79	F0CNT	O	Filter f0 control signal output terminal Not used (open)
80	XLRF	O	Serial data latch pulse signal output terminal Not used (open)
81	CKRF	O	Serial data transfer clock signal output terminal Not used (open)
82	DTRF	O	Writing serial data output terminal Not used (open)
83	APCREF	O	Control signal output to the reference voltage generator circuit for the laser automatic power control
84	LDDR	O	PWM signal output for the laser automatic power control Not used (open)
85	TRDR	O	Tracking servo drive PWM signal (–) output to the BH6511FS (IC303)
86	TFDR	O	Tracking servo drive PWM signal (+) output to the BH6511FS (IC303)
87	DVDD	—	Power supply terminal (+3.3V) (digital system)
88	FFDR	O	Focus servo drive PWM signal (+) output to the BH6511FS (IC303)

Pin No.	Pin Name	I/O	Description
89	FRDR	O	Focus servo drive PWM signal (–) output to the BH6511FS (IC303)
90	FS4	O	Clock signal (176.4 kHz) output terminal (X'tal system) Not used (open)
91	SRDR	O	Sled servo drive PWM signal (–) output to the BH6511FS (IC303)
92	SFDR	O	Sled servo drive PWM signal (+) output to the BH6511FS (IC303)
93	SPRD	O	Spindle servo drive PWM signal (–) output to the BH6511FS (IC303)
94	SPFD	O	Spindle servo drive PWM signal (+) output to the BH6511FS (IC303)
95	FGIN	I	Not used (fixed at "L")
96	TEST1	I	Input terminal for the test (fixed at "L")
97	TEST2	I	
98	TEST3	I	
99	DVSS	—	Ground terminal (digital system)
100	EFMO	O	EFM signal output terminal when recording mode Not used (open)

* I (A) for analog input, O (3) for 3-state output, and O (A) for analog output in the column I/O.

• **SERVO BOARD IC302 CXA2523AR (RF AMP, FOCUS/TRACKING ERROR AMP)**

Pin No.	Pin Name	I/O	Description
1	I	I	I-V converted RF signal I input from the optical pick-up block detector
2	J	I	I-V converted RF signal J input from the optical pick-up block detector
3	VC	O	Middle point voltage (+1.65V) generation output terminal
4 to 9	A to F	I	Signal input from the optical pick-up detector
10	PD	I	Light amount monitor input from the optical pick-up block laser diode
11	APC	O	Laser amplifier output terminal to the automatic power control circuit
12	APCREF	I	Reference voltage input terminal for setting laser power
13	GND	—	Ground terminal
14	TEMPI	I	Connected to the temperature sensor Not used (open)
15	TEMPR	O	Output terminal for a temperature sensor reference voltage Not used (open)
16	SWDT	I	Writing serial data input from the MD mechanism controller (IC501)
17	SCLK	I	Serial data transfer clock signal input from the MD mechanism controller (IC501)
18	XLAT	I	Serial data latch pulse signal input from the MD mechanism controller (IC501)
19	$\overline{\text{XSTBY}}$	I	Standby signal input terminal "L": standby (fixed at "H" in this set)
20	F0CNT	I	Center frequency control voltage input terminal of internal circuit (BPF22, BPF3T, EQ) input terminal
21	VREF	O	Reference voltage output terminal Not used (open)
22	EQADJ	I	Center frequency setting terminal for the internal circuit (EQ)
23	3TADJ	I	Center frequency setting terminal for the internal circuit (BPF3T)
24	VCC	—	Power supply terminal (+3.3V)
25	WBLADJ	I	Center frequency setting terminal for the internal circuit (BPF22)
26	TE	O	Tracking error signal output to the CXD2652AR (IC301)
27	CSLED	I	Connected to the external capacitor for low-pass filter of the sled error signal
28	SE	O	Sled error signal output to the CXD2652AR (IC301)
29	ADFM	O	FM signal output of the ADIP
30	ADIN	I	Receives a ADIP FM signal in AC coupling
31	ADAGC	I	Connected to the external capacitor for ADIP AGC
32	ADFG	O	ADIP duplex signal (22.05 kHz ± 1 kHz) output to the CXD2652AR (IC301)
33	AUX	O	Auxiliary signal (I_3 signal/temperature signal) output terminal Not used (open)
34	FE	O	Focus error signal output to the CXD2652AR (IC301)
35	ABCD	O	Light amount signal (ABCD) output to the CXD2652AR (IC301)
36	BOTM	O	Light amount signal (RF/ABCD) bottom hold output to the CXD2652AR (IC301)
37	PEAK	O	Light amount signal (RF/ABCD) peak hold output to the CXD2652AR (IC301)
38	RF	O	Playback EFM RF signal output to the CXD2652AR (IC301)
39	RFAGC	I	Connected to the external capacitor for RF auto gain control circuit
40	AGCI	I	Receives a RF signal in AC coupling
41	COMPO	O	User comparator output terminal Not used (open)
42	COMPP	I	User comparator input terminal Not used (fixed at "L")
43	ADDC	I	Connected to the external capacitor for cutting the low band of the ADIP amplifier
44	OPO	O	User operational amplifier output terminal Not used (open)
45	OPN	I	User operational amplifier inversion input terminal Not used (fixed at "L")
46	RFO	O	RF signal output terminal
47	MORFI	I	Receives a MO RF signal in AC coupling
48	MORFO	O	MO RF signal output terminal

• **SERVO BOARD IC501 CXP84340-217Q (MD MECHANISM CONTROLLER)**

Pin No.	Pin Name	I/O	Description
1 to 5	TIN3 to TIN7	I/O	Input of the 4×8 matrix test keys (“L” is always output, except in test mode) Not used (open)
6	LOAD	O	Loading motor control signal output to the motor driver (IC305) “H” active *1
7	EJECT	O	Loading motor control signal output to the motor driver (IC305) “H” active *1
8, 9	NCO	O	Not used (open)
10	MDMON	O	Power supply on/off control signal output of the MD mechanism deck section main power supply and loading motor drive (IC305) power supply “H”: power on
11	$\overline{\text{E-SW}}$	I	Inputs the disc loading completion detect switch detection signal “L”: When completed of the disc loading operation
12	AG-OK	O	Output of aging status in test mode “L”: under aging, “H”: aging completed Not used (open)
13	ADJ-OK	O	Output of status when aging completed in test mode “L”: aging NG, “H”: aging OK Not used (open)
14 to 17	NCO	O	Not used (open)
18	DFCTSEL	I	Select whether defect function is used for the CXD2652AR (IC301) “L”: used this function , “H”: not used this function (fixed at “H” in this set)
19	DPLLSEL	I	Select whether digital PLL function is used for the CXD2652AR (IC301) “L”: used this function , “H”: not used this function (fixed at “H” in this set)
20	EMPHSEL	I	Select whether emphasis signal output from pin or unilink data “L”: outputs from both pin and unilink data, “H”: output from pin only (fixed at “H” in this set)
21	LOCK	O	Mini-disc lock detection signal output to the master controller (IC501) “H”: lock
22	NCO	O	Not used (open)
23	2M/$\overline{\text{4M}}$	I	Select whether D-RAM capacitance 2M bit or 4M bit “L”: 4M bit (external D-RAM) , “H”: 2M bit (internal D-RAM of CXD2652AR) (fixed at “L” in this set)
24, 25	NCO	O	Not used (open)
26	MNT0	I	Focus OK signal input from the CXD2652AR (IC301) “H” is input when focus is on (“L”: NG)
27	MNT1	I	Track jump detection signal input from the CXD2652AR (IC301)
28	MNT2	I	Busy monitor signal input from the CXD2652AR (IC301)
29	MNT3	I	Spindle servo lock status monitor signal input from the CXD2652AR (IC301)
30	$\overline{\text{RESET}}$	I	System reset signal input from the master controller (IC501), reset signal generator (IC652) and reset switch (SW503) “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
31	EXTAL	O	Main system clock output terminal (10 MHz)
32	XTAL	I	Main system clock input terminal (10 MHz)
33	VSS	—	Ground terminal
34	TX	O	Sub system clock output terminal (32.768 kHz) Not used (open)
35	TEX	I	Sub system clock input terminal (32.768 kHz) Not used (fixed at “L”)
36	AVSS	—	Ground terminal (for A/D converter)
37	AVREF	I	Reference voltage input terminal (+5V) (for A/D converter)
38	INIT	I	Initial reset signal input terminal (A/D input) (fixed at “H”)
39	TEMP	I	Temperature sensor (TH501) input terminal (A/D input)
40	ACNT	I	Select the number of load/eject aging times (A/D input) 0H – 54H (30 times), 55H – OA9H (20 times), OAAH – OFFH (10 times)
41	DO-SEL	I	Select the digital output bits (A/D input)
42	EE-CS	O	Chip select signal output to the external EEPROM device Not used (open)
43	EE-CKO	O	Serial data transfer clock signal output to the external EEPROM device Not used (open)
44	EE-SIO	I/O	Two way data bus with the external EEPROM device Not used (open)
45	MD-SO	O	Writing serial data signal output to the CXD2652AR (IC301) and CXA2523AR (IC302)
46	LINKOFF	O	Unilink on/off control signal output for the SONY bus “L”: link on, “H”: link off

Pin No.	Pin Name	I/O	Description
47	UNIREQ	O	Data request signal output terminal (for SONY bus) "H": request on Not used (open)
48	UNICKIO	I/O	Serial clock signal input from the master controller (IC501) or serial clock signal output to the SONY bus interface (IC701) and master controller (IC501) (for SONY bus)
49	UNISI	I	Serial data input from the SONY bus interface (IC701)
50	UNISO	O	Serial data output to the SONY bus interface (IC701)
51	MD-CKO	O	Serial data transfer clock signal output to the CXD2652AR (IC301) and CXA2523AR (IC302)
52	MD-SI	I	Reading serial data signal input from the CXD2652AR (IC301)
53	NCO	O	Not used (open)
54	SENS	I	Internal status (SENSE) input from the CXD2652AR (IC301)
55	CC-XINT	I	Interrupt status input from the CXD2652AR (IC301)
56	$\overline{\text{LIMIT-IN}}$	I	Detection input from the sled limit-in detect switch The optical pick-up is inner position when "L"
57	EJT-KEY	I	Eject request signal input terminal "L": eject on Not used (fixed at "H")
58	ERROR-PWM	O	PWM error monitor output terminal (C1and ATER is output when test mode) Not used (open)
59	$\overline{\text{MD-RST}}$	O	Reset signal output to the PCM1718E (IC101), CXD2652AR (IC301) and BH6511FS (IC303) "L": reset
60	BU-IN	I	Battery detect signal input from the SONY bus interface (IC701) and battery check circuit "H": battery on
61	$\overline{\text{BUS-ON}}$	I	SONY bus on/off control signal input from the master controller (IC501) "L": bus on
62	SQSY	I	Subcode Q sync (SCOR) input from the CXD2652AR (IC301) "L" is input every 13.3 msec Almost all, "H" is input
63	$\overline{\text{C-SW}}$	I	Inputs the disc loading start or disc eject completion detect switch detection signal "L": When start or eject completed of the disc loading operation
64	MD-LAT	O	Serial data latch pulse signal output to the CXD2652AR (IC301) and CXA2523AR (IC302)
65	MD-ON	O	Power supply on/off control signal output of the MD mechanism deck section main power supply "H": power on
66	DEEMP	O	Emphasis on/off control signal output to the PCM1718E (IC101) "H": emphasis on
67	A-MUTE	O	Audio muting on/off control signal output terminal
68	NCO	O	Not used (open)
69	TSTCKO	O	Output of clock signal for the test mode display Not used (open)
70	TSTSO	O	Output of data for the test mode display Not used (open)
71	$\overline{\text{TSTMOD}}$	I	Setting terminal for the test mode "L": test mode, "H": normal mode
72	VCC	—	Power supply terminal (+5V)
73	NIL	I	Not used (fixed at "H")
74 to 77	TOUT0 to TOUT3	O	Output of the 4×8 matrix test keys Not used (open)
78 to 80	TIN0 to TIN2	I/O	Input of the 4×8 matrix test keys ("L" is always output, except in test mode) Not used (open)

*1 Loading motor (M903) control

Operation / Terminal	IN	OUT	BRAKE	STOP
LOAD (pin ⑥)	"H"	"L"	"H"	"L"
EJECT (pin ⑦)	"L"	"H"	"H"	"L"

• **MAIN BOARD IC501 MB90574BPMT-G-266-BND (MASTER CONTROLLER)**

Pin No.	Pin Name	I/O	Description
1	TUNON	O	Tuner system power supply on/off control signal output to the BA4908 (IC671) "H": tuner power on
2	ANT CUT	O	Tuner system power supply on/off control signal output terminal "H": tuner power on Not used (open)
3	$\overline{\text{BUSON}}$	O	Bus on/off control signal output to the MD mechanism controller (IC501) and SONY bus interface (IC701) "L": bus on
4 to 6	NCO	O	Not used (open)
7	ILLON	O	Power on/off control signal output of the illumination LED and liquid crystal display driver (IC901) "H": power on
8	VCC	—	Power supply terminal (+5V)
9	E2P SIO	I/O	Two-way data E2P bus with the FM/AM tuner unit (TU1)
10	E2P CKO	O	E2P bus clock signal output to the FM/AM tuner unit (TU1)
11	$\overline{\text{SYSRST}}$	O	System reset signal output to the MD mechanism controller (IC501) and SONY bus interface (IC701) "L": reset
12	$\overline{\text{DOORSW}}$	I	Front panel open/close detection signal input terminal "L" is input when the front panel is closed
13	LCDSO	O	Serial data output to the liquid crystal display driver (IC901)
14	LCDCKO	O	Serial data transfer clock signal output to the liquid crystal display driver (IC901)
15	LCDCE	O	Chip enable signal output to the liquid crystal display driver (IC901) "H" active
16	BEEP	O	Beep sound drive signal output to the power amplifier (IC611)
17	UNISI	I	Serial data input from the SONY bus interface (IC701)
18	UNISO	O	Serial data output to the SONY bus interface (IC701)
19	UNICKO	O	Serial clock signal output to the MD mechanism controller (IC501) and SONY bus interface (IC701)
20	UNICKI	I	Serial clock signal input from the MD mechanism controller (IC501) (for SONY bus)
21	CD MD	I	Setting terminal for the internal mechanism CD or MD "L": CD, "H": MD (fixed at "H" in this set)
22	$\overline{\text{FLASHW}}$	I	Internal flash memory data write mode detection signal input terminal "L": data write mode Not used
23	NCO	O	Not used (open)
24	SIRCS	I	Sircs remote control signal input from the remote control receiver (IC951)
25 to 28	NCO	O	Not used (open)
29	DOORIND	O	LED drive signal output of the MD disc slot illumination and ⏏ indicator (LED810, LSW810) "H": LED on "H" is output to turn on LED when front panel is opened
30, 31	NCO	O	Not used (open)
32	NS MASK	O	Discharge control signal output for the noise detection circuit "H": discharge
33	VSS	—	Ground terminal
34	C	—	Connected to coupling capacitor for the power supply
35	$\overline{\text{AD ON}}$	O	A/D converter power control signal output terminal When the KEYACK (pin ⑯) that controls reference voltage power for key A/D conversion input is active, "L" is output from this terminal to enable the input
36	REIN0	I	Dial pulse input of the rotary encoder (RE901) (for VOLUME/BASS/TREBLE/BALANCE/FADER control)
37	REIN1	I	
38	DVCC	—	Power supply terminal (+5V) (for D/A converter)
39	DVSS	—	Ground terminal (for D/A converter)
40, 41	NCO	O	Not used (open)
42	AVCC	—	Power supply terminal (+5V) (for analog system)

Pin No.	Pin Name	I/O	Description
43	AVRH	I	Reference voltage (+5V) input terminal (for A/D converter)
44	AVRL	I	Reference voltage (0V) input terminal (for A/D converter)
45	AVSS	—	Ground terminal (for analog system)
46	KEYIN0	I	Key input terminal (A/D input) (LSW901 to LSW908, S901 to S904) OFF, SOURCE, SOUND, MENU, PTY DSPL, LIST, ENTER, MODE, SEEK/AMS - ⏮ ◀◀ + ▶▶⏭ ▶▶, DISC/PRST +, PRST/DISC - keys input
47	KEYIN1	I	Key input terminal (A/D input) (LSW810, LSW909 to LSW917) ⏏, D-BASS, TA, AF, 6 to 3 SHUF 2, REP 1 keys input
48	RCIN0	I	Rotary remote commander key input terminal (A/D input)
49	DSTSEL	I	Destination setting terminal (fixed at "L" in this set)
50	QUALITY	I	Noise level detection signal input at SEEK mode (A/D input)
51	FMAGC	I	FM AGC detection signal input from the FM/AM tuner unit (TU1) (A/D input)
52	MPTH	I	Multi-path detection signal input from the RDS decoder (IC51) (A/D input)
53	VSM	I	FM and AM signal meter voltage detection input from the FM/AM tuner unit (TU1) (A/D input)
54	VCC	—	Power supply terminal (+5V)
55	RAMBU	I	Internal RAM reset detection signal input terminal Input terminal to check that RAM data are not destroyed due to low voltage This checking is made within 100 msec after reset Not used (fixed at "H")
56	TUNATT	O	Muting on/off control signal output of the FM/AM tuner signal "H": muting on
57	$\overline{\text{VOLATT}}$	O	Pre amplifier muting on/off control signal output to the electrical volume (IC151) "L": muting on
58	ATT	O	Audio line muting on/off control signal output terminal "H": muting on
59	AMPON	O	Standby on/off control signal output to the power amplifier (IC611) "L": standby mode, "H": ampifier on
60	$\overline{\text{AMPATT}}$	O	Power amplifier muting on/off control signal output to the power amplifier (IC611) "L": muting on
61	COLSW	I	Setting terminal for the illumination color "L": 2 color, "H": 1 color (fixed at "H" in this set)
62	COLSEL	I	Setting terminal for the illumination color "L": amber, "H": green (fixed at "L" in this set)
63	VSS	—	Ground terminal
64	DAVN	I	Data transmit completed detection signal input from the RDS decoder (IC51) "H" active
65	FILE	I	Setting terminal for the custom file "L": unavailable, "H": available (fixed at "H" in this set)
66	TEXT	I	Setting terminal for the CD text "L": unavailable, "H": available (fixed at "H" in this set)
67	$\overline{\text{NOSESW}}$	I	Front panel block remove/attach detection signal input from the nose detection switch (SW504) "L": front panel is attached
68, 69	NCO	O	Not used (open)
70	I2C SIO	I/O	Two-way data I2C bus with the FM/AM tuner unit (TU1), RDS decoder (IC51) and electrical volume (IC151)
71	I2C CKO	O	I2C bus clock signal output to the FM/AM tuner unit (TU1), RDS decoder (IC51) and electrical volume (IC151)
72	NCO	O	Not used (open)
73	X1A	O	Sub system clock output terminal (32.768 kHz)
74	X0A	I	Sub system clock input terminal (32.768 kHz)
75	NCO	O	Not used (open)
76	KEYACK	I	Input of acknowledge signal for the key entry Acknowledge signal is input to accept function and eject keys in the power off status On at input of "H"
77	BUIN	I	Battery detection signal input from the SONY bus interface (IC701) and battery detect circuit "L" is input at low voltage

Pin No.	Pin Name	I/O	Description
78	ILLIN	I	Auto dimmer control illumination line detection signal input terminal "H" is input at dimmer detection Not used (fixed at "L")
79	TELATT	I	Telephone detection signal input terminal At input of "H", the signal is attenuated by –20 dB
80	NCO	O	Not used (open)
81	$\overline{\text{TEST IN}}$	I	Setting terminal for the test mode "L": test mode, Normally: fixed at "H"
82	$\overline{\text{ACC IN}}$	I	Accessory detection signal input terminal "L": accessory on
83	NCO	O	Not used (open)
84	LOCKIN	I	Mini-disc lock detection signal input from the MD mechanism controller (IC501) "H": lock
85	$\overline{\text{RCIN1}}$	I	Rotary remote commander shift key input terminal "L": shift
86	HSTX	I	Hardware standby input terminal "L": hardware standby mode Reset signal input in this set
87	MD2	I	Setting terminal for the CPU operational mode (fixed at "L" in this set)
88	MD1	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
89	MD0	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
90	$\overline{\text{RSTX}}$	I	System reset signal input from the reset signal generator (IC652) and reset switch (SW503) "L": reset "L" is input for several 100 msec after power on, then it changes to "H"
91	VSS	—	Ground terminal
92	X0	I	Main system clock input terminal (3.68 MHz)
93	X1	O	Main system clock output terminal (3.68 MHz)
94	VCC	—	Power supply terminal (+5V)
95 to 97	NCO	O	Not used (open)
98	DIM SEL	I	Setting terminal for the dimmer "L": dimmer in, "H": no dimmer (fixed at "L" in this set)
99	TAP CD	I	Setting terminal for the internal mechanism tape or CD "L": CD, "H": tape (fixed at "L" in this set)
100, 101	NCO	O	Not used (open)
102	$\overline{\text{AMTL IN}}$	I	Auto metal detection signal input terminal "L": auto metal Not used (open)
103	AMS IN	I	Input terminal of whether a music is present or not is detected at auto music sensor "L": music is present, "H": music is not present Not used (open)
104	REEL	I	Rotation detect signal input terminal Not used (open)
105	POS0	I	Tape position (EJECT/FF/REW/REV/ FWD mode) detect input from the tape operation switch on the deck mechanism Not used this function (open) POS0: "L": EJECT mode, "H": others mode POS1: "L": FF and FWD mode, "H": others mode POS2: "L": REW mode, "H": others mode POS3: "L": REV and EJECT mode, "H": others mode
106	POS1	I	
107	POS2	I	
108	POS3	I	
109	LM EJ	O	Loading motor control signal output terminal "H" active (For the eject direction and reverse side operation) Not used (open)
110	LM LD	O	Loading motor control signal output terminal "H" active (For the loading direction and forward side operation) Not used (open)
111	CM ON	O	Capstan/reel motor control signal output terminal "H": motor on Not used (open)
112	TAPON	O	Tape system power supply on/off control signal output terminal "H": tape on Not used (open)
113	N ROUT	O	Forward/reverse direction control signal output terminal "L": forward direction, "H": reverse direction Not used (open)
114	AMSON	O	Tape auto music sensor control signal output terminal "L" is output to lower the gain for audio level at FF/REW mode Not used (open)
115	MTLON	I/O	METAL control in/out terminal At initial mode: auto/manual mode selection input of METAL function (manual at "L" input) At manual mode: METAL on/off control signal output terminal (METAL on at "H" output) Not used this function (open)
116	DOLON	I/O	Dolby control in/out terminal At initial mode: valid/invalid selection input of dolby function (valid at "L" input) At normal mode: dolby on/off control signal output terminal (dolby on at "H" output) Not used this function (open)

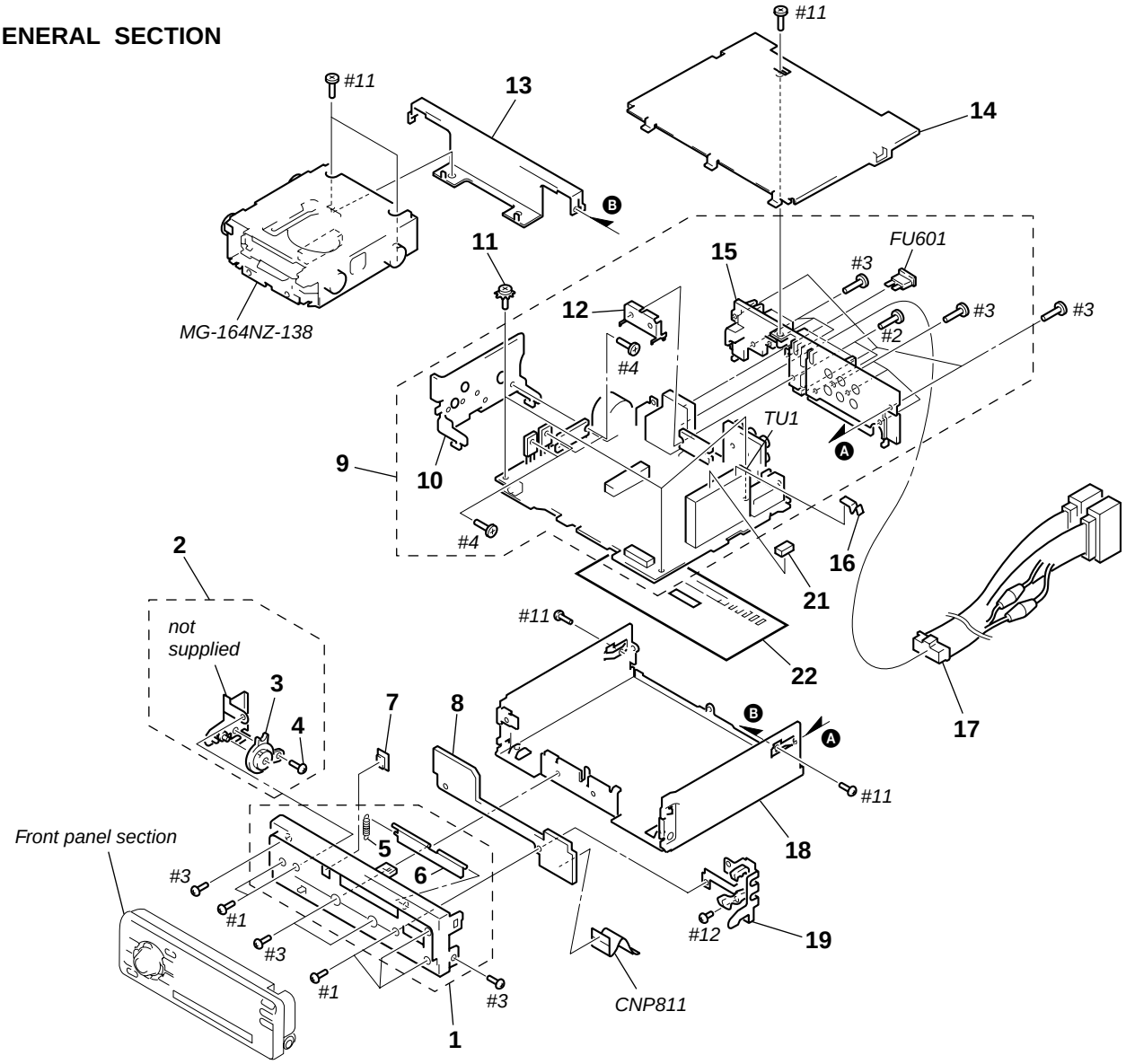
Pin No.	Pin Name	I/O	Description
117	TAPATT	O	Audio signal select control signal output terminal Not used (open)
118	NCO	O	Not used (open)
119	VSS	—	Ground terminal
120	PW ON	O	Main system power supply on/off control signal output to the BA4908 (IC671) “H”: power on

SECTION 5
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

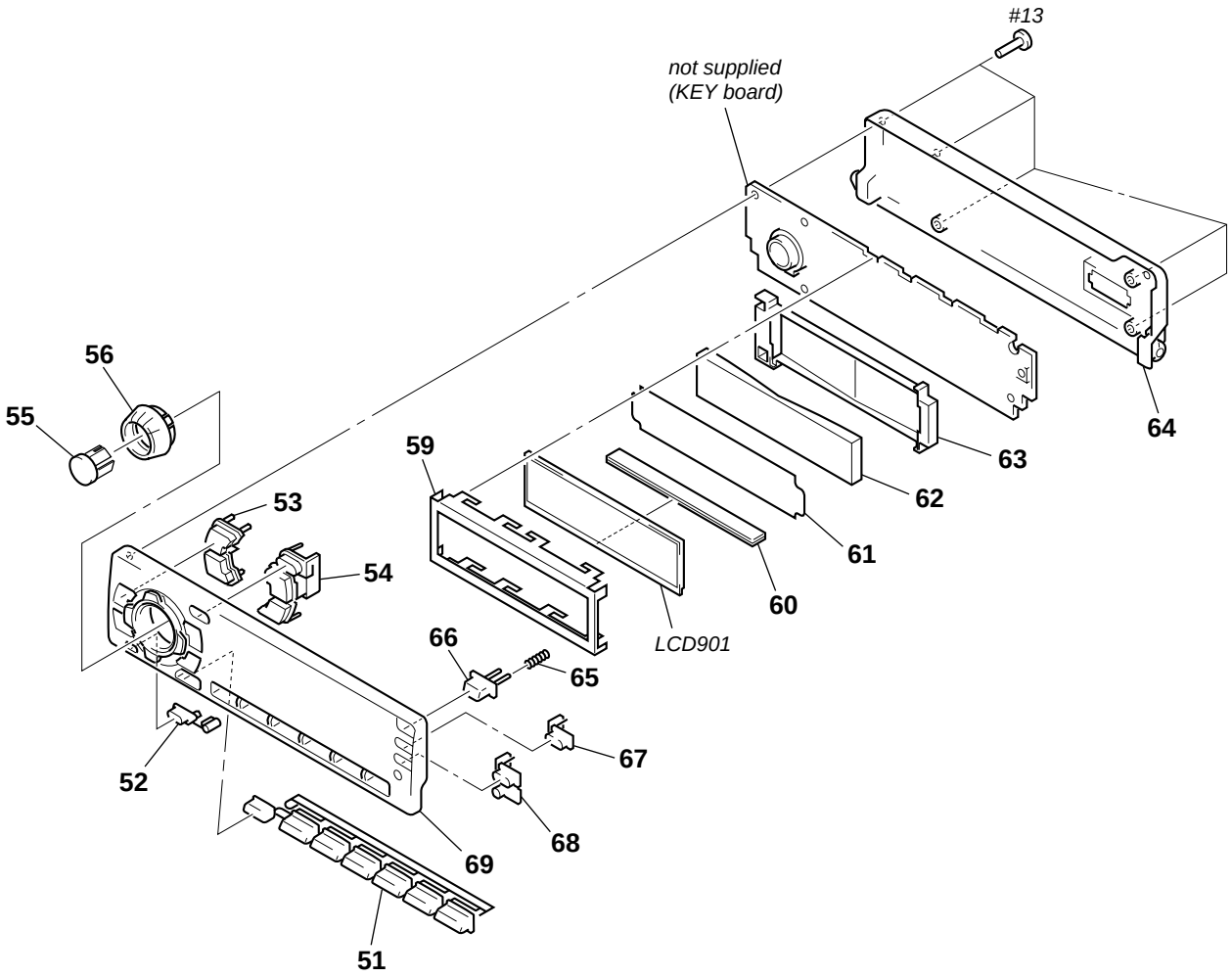
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

(1) GENERAL SECTION



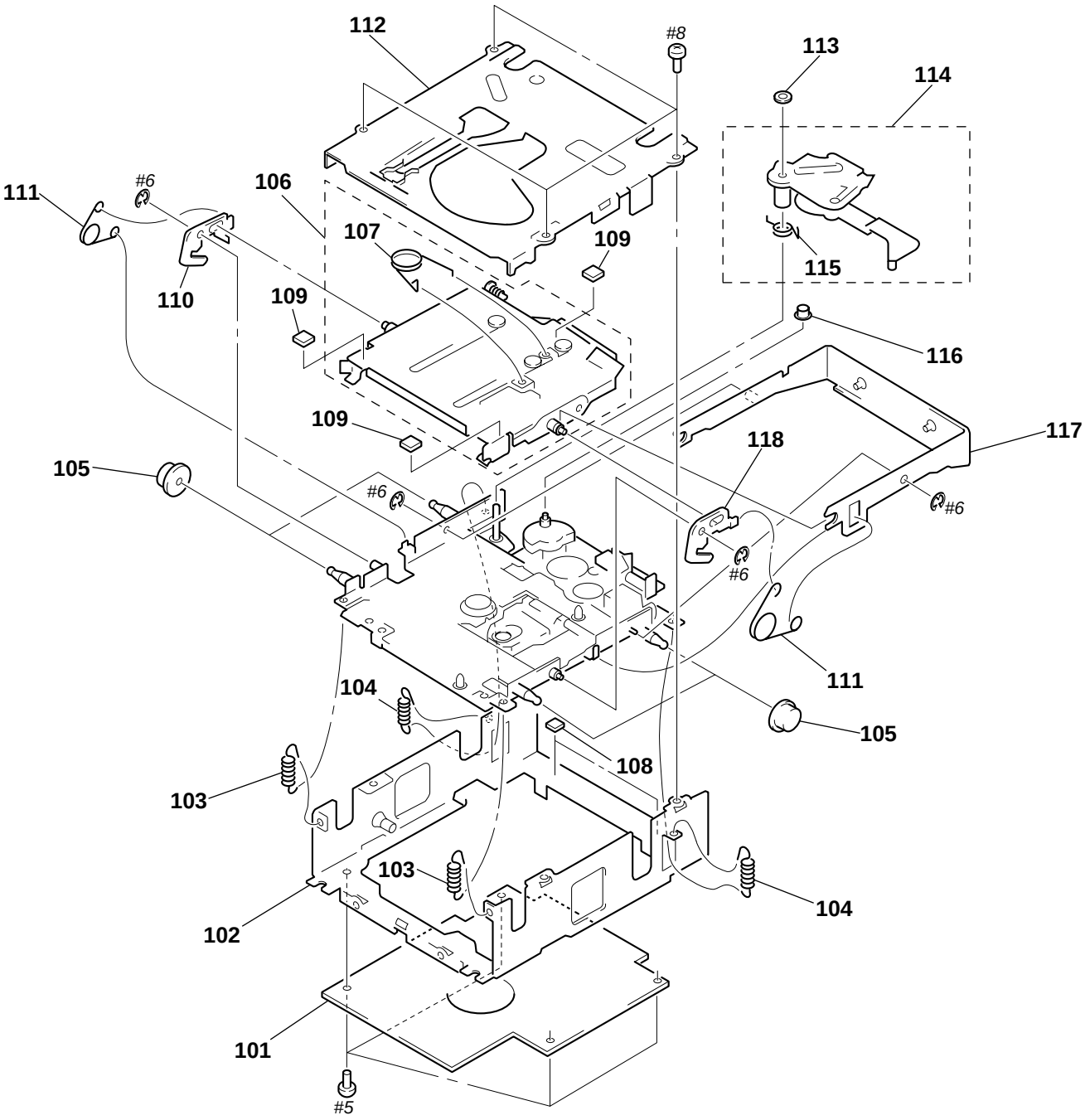
Ref. No.	Part No.	Description	Remark
1	X-3378-458-1	PANEL ASSY, SUB	
2	X-3376-699-2	GEAR ASSY	
3	3-030-909-02	DAMPER, OIL	
4	3-713-786-51	SCREW +P 2X3	
5	3-034-086-01	SPRING (DOOR)	
6	3-033-750-02	DOOR (MD)	
7	3-040-990-01	BUTTON (EJECT) (⏏)	
* 8	1-677-057-11	SUB BOARD	
* 9	A-3294-866-A	MAIN BOARD, COMPLETE	
* 10	3-041-011-01	HEAT SINK (REG)	
11	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
* 12	3-040-998-01	BRACKET (IC)	
* 13	3-041-017-01	BRACKET (MD)	
* 14	3-040-995-01	COVER	
* 15	3-040-996-21	HEAT SINK (2P)	
* 16	3-045-878-01	PLATE (TU), GROUND	
17	1-776-527-61	CORD (WITH CONNECTOR) (ISO) (POWER)	
* 18	3-040-994-21	CHASSIS	
19	X-3377-621-2	LOCK ASSY	
* 21	3-045-877-01	CUSHION (TU)	
* 22	3-045-828-01	INSULATED PLATE	
CNP811	1-792-195-11	CABLE, FLEXIBLE, FLAT	
FU601	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
TU1	A-3320-738-A	TUNER UNIT (TUX-020)	

(2) FRONT PANEL SECTION



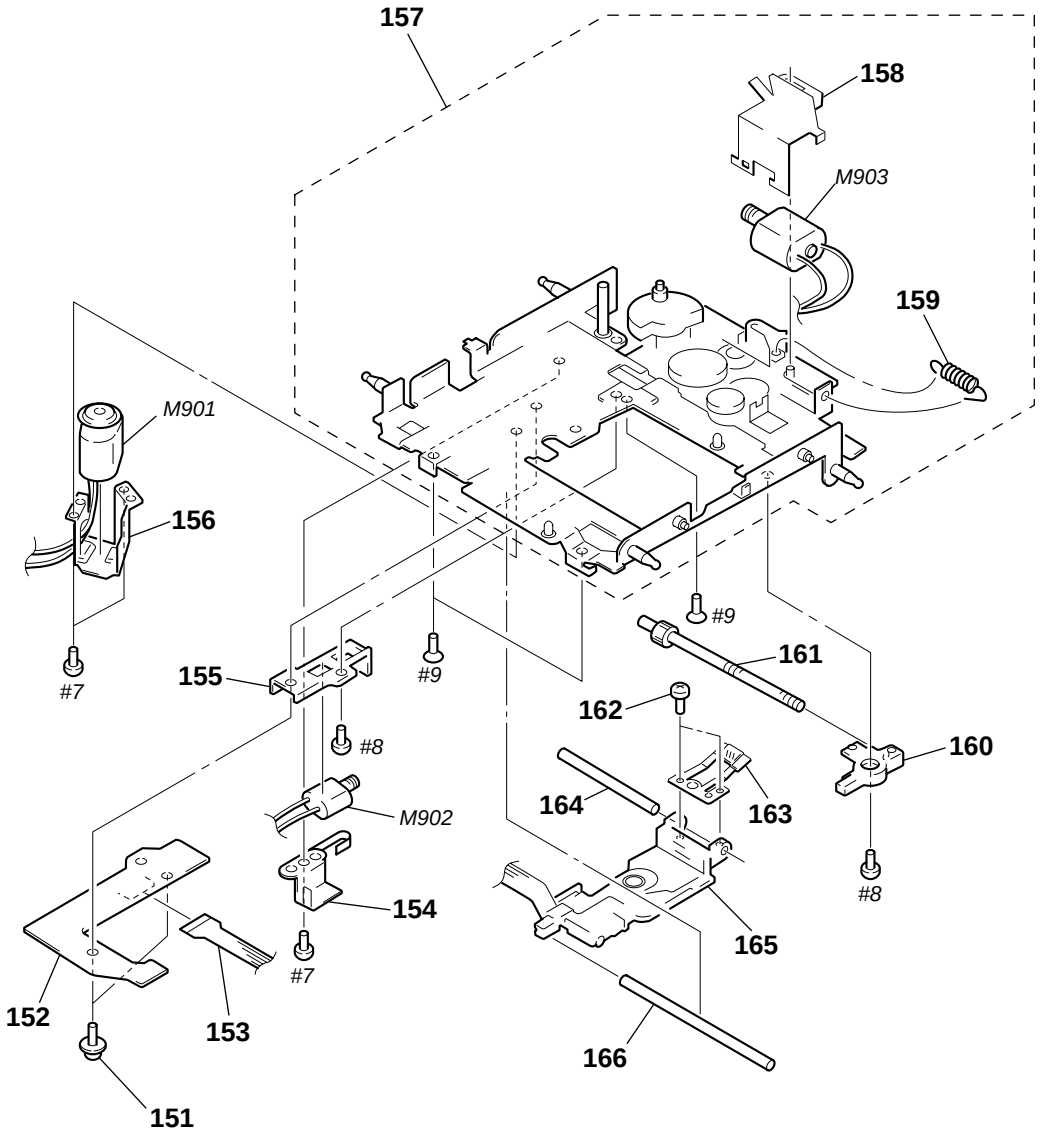
Ref. No.	Part No.	Description	Remark
51	3-041-010-01	BUTTON (1-6/M) (MODE. 1. 2. 3. 4. 5. 6)	
52	3-040-987-01	BUTTON (OFF)	
53	3-040-986-01	BUTTON (MENU/SOUND)	
54	3-041-003-01	BUTTON (LIST/ENTER) (DSPL. LIST. ENTER)	
55	3-040-980-01	BUTTON (SOURCE)	
56	3-040-981-01	KNOB (VOL)	
* 59	3-040-997-01	PLATE (LCD), GROUND	
60	1-694-660-11	CONDUCTIVE BOARD, CONNECTION	
* 61	3-041-371-01	SHEET (REFLECTOR)	
* 62	3-040-993-01	PLATE (LCD), LIGHT GUIDE	
* 63	3-040-992-01	HOLDER (LCD)	
64	X-3378-398-1	PANEL ASSY, FRONT BACK	
65	3-935-151-01	SPRING (OPEN)	
66	3-040-989-01	BUTTON (OPEN)	
67	3-041-005-11	BUTTON (D) (D-BASS)	
68	3-041-006-01	BUTTON (AF/TA)	
69	X-3378-687-1	FRONT PANEL (SV) ASSY	
LCD901	1-803-889-11	DISPLAY PANEL, LIQUID CRYSTAL	

(3) MECHANISM DECK SECTION-1 (MG-164NZ-138)



Ref. No.	Part No.	Description	Remark
* 101	A-3326-036-A	SERVO BOARD, COMPLETE	
* 102	X-3376-799-1	CHASSIS ASSY, MD	
103	3-032-714-02	SPRING (FLOAT F), TENSION	
104	3-921-111-01	SPRING (FLOAT B), TENSION	
105	3-919-273-01	DAMPER, OIL	
* 106	X-3376-796-3	HOLDER ASSY	
107	3-032-682-01	SPRING (HOLDER)	
* 108	3-034-301-01	CUSHION (EJ2)	
* 109	3-034-302-01	CUSHION (EJ3)	
* 110	3-032-712-01	LEVER (LOCK R)	
111	3-919-281-01	SPRING (CHUCKING)	
* 112	X-3376-800-1	COVER ASSY, MD	
113	3-035-932-01	WASHER, STOPPER	
* 114	X-3376-797-3	LEVER (LE) ASSY	
115	3-032-707-01	SPRING (LEVER LE)	
116	3-925-034-01	ROLLER (GEAR E)	
* 117	X-3376-798-1	ARM ASSY, CHUCKING	
* 118	3-032-711-01	LEVER (LOCK L)	

(4) MECHANISM DECK SECTION-2 (MG-164NZ-138)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
151	2-626-617-01	SCREW (2X8)	
152	A-3326-034-A	SENSOR BOARD, COMPLETE	
153	1-654-693-11	SENSOR FLEXIBLE BOARD	
154	3-919-283-01	BRACKET (SL)	
* 155	3-032-704-01	BASE (SL)	
156	3-919-297-01	BRACKET (SP)	
157	A-3301-750-A	CHASSIS (OP) ASSY	
158	3-032-660-01	BRACKET (LO)	
159	3-032-669-01	SPRING (RACK), TENSION	
* 160	3-032-705-01	BEARING (SL)	

Ref. No.	Part No.	Description	Remark
161	X-3373-213-1	SCREW ASSY, FEED	
162	3-939-590-07	SCREW (IB LOCK)	
163	3-010-091-01	SPRING (SL FEED)	
164	3-919-293-01	SHAFT (OPT S), GUIDE	
⚠165	8-583-065-03	OPTICAL PICK-UP KMS-241C/J1RP	
166	3-920-537-01	SHAFT (OPT L), GUIDE	
M901	A-3301-407-A	MOTOR ASSY, SP (SPINDLE)	
M902	A-3291-190-A	MOTOR ASSY, SL (SLED)	
M903	A-3291-191-A	MOTOR ASSY, LO (LOADING)	

KEY

SECTION 6
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
		KEY BOARD			
		**********			
	1-694-660-11	CONDUCTIVE BOARD, CONNECTION			
*	3-040-992-01	HOLDER (LCD)			
*	3-040-993-01	PLATE (LCD), LIGHT GUIDE			
*	3-040-997-01	PLATE (LCD), GROUND			
*	3-041-371-01	SHEET (REFLECTOR)			
		< CAPACITOR >			
C951	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C952	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C953	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C954	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C955	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C956	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
		< CONNECTOR >			
CN901	1-794-065-21	PLUG, CONNECTOR 14P			
		< DIODE >			
D901	8-719-158-49	DIODE UDZ-TE-17-12B			
D902	8-719-056-82	DIODE UDZ-TE-17-6.2B			
D903	8-719-056-82	DIODE UDZ-TE-17-6.2B			
D904	8-719-056-82	DIODE UDZ-TE-17-6.2B			
D951	8-719-976-99	DIODE UDZ-TE-17-5.1B			
D952	8-719-976-99	DIODE UDZ-TE-17-5.1B			
		< IC >			
IC901	8-759-366-34	IC LC75824E			
IC951	8-749-012-25	IC RS-170-TU			
		< LIQUID CRYSTAL DISPLAY >			
LCD901	1-803-889-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< LED >			
LED901	8-719-061-16	LED CL-190SR-CD-T (ILLUMINATION)			
LED902	8-719-061-16	LED CL-190SR-CD-T (ILLUMINATION)			
LED903	8-719-061-16	LED CL-190SR-CD-T (ILLUMINATION)			
LED904	8-719-061-16	LED CL-190SR-CD-T (ILLUMINATION)			
LED910	8-719-072-40	LED LBA676-J2K1K2 (LCD BACK LIGHT)			
LED911	8-719-072-40	LED LBA676-J2K1K2 (LCD BACK LIGHT)			
LED912	8-719-072-40	LED LBA676-J2K1K2 (LCD BACK LIGHT)			
LED913	8-719-072-40	LED LBA676-J2K1K2 (LCD BACK LIGHT)			
LED914	8-719-072-40	LED LBA676-J2K1K2 (LCD BACK LIGHT)			
LED915	8-719-072-40	LED LBA676-J2K1K2 (LCD BACK LIGHT)			
		< SWITCH >			
LSW901	1-771-883-21	SWITCH, TACTILE (WITH LED) (OFF)			
LSW902	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SOURCE)			
LSW903	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SOUND)			
LSW904	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (MENU)			
LSW905	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (PTY, DSPL)			
LSW906	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (LIST)			
LSW907	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (ENTER)			
LSW908	1-771-883-21	SWITCH, TACTILE (WITH LED) (MODE)			
LSW909	1-762-737-11	SWITCH, KEYBOARD (LED) (D-BASS)			
LSW910	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (TA)			
LSW911	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (AF)			
LSW912	1-771-883-21	SWITCH, TACTILE (WITH LED) (6)			
LSW913	1-771-883-21	SWITCH, TACTILE (WITH LED) (5)			
LSW914	1-771-883-21	SWITCH, TACTILE (WITH LED) (4)			
LSW915	1-771-883-21	SWITCH, TACTILE (WITH LED) (3)			
LSW916	1-771-883-21	SWITCH, TACTILE (WITH LED) (SHUF 2)			
LSW917	1-771-883-21	SWITCH, TACTILE (WITH LED) (REP 1)			
		< TRANSISTOR >			
Q903	8-729-904-75	TRANSISTOR DTD114EK-T-146			
		< RESISTOR >			
R901	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R902	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R903	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R904	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R905	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R906	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R907	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R908	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R909	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R910	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R911	1-208-806-11	RES, CHIP	10K	2%	1/10W
R912	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R913	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R914	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R915	1-216-651-11	METAL CHIP	1K	0.5%	1/10W

Ref. No.	Part No.	Description			Remark
R916	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R917	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R918	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R919	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W
R920	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R921	1-216-810-11	METAL CHIP	120	5%	1/16W
R923	1-216-812-11	METAL CHIP	180	5%	1/16W
R925	1-216-031-00	METAL CHIP	180	5%	1/10W
R927	1-216-031-00	METAL CHIP	180	5%	1/10W
R931	1-216-813-11	METAL CHIP	220	5%	1/16W
R932	1-216-813-11	METAL CHIP	220	5%	1/16W
R933	1-216-813-11	METAL CHIP	220	5%	1/16W
R938	1-216-809-11	METAL CHIP	100	5%	1/16W
R939	1-216-821-11	METAL CHIP	1K	5%	1/16W
R951	1-216-819-11	METAL CHIP	680	5%	1/16W
R952	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R953	1-216-857-11	METAL CHIP	1M	5%	1/16W
R954	1-216-049-11	RES, CHIP	1K	5%	1/10W
R955	1-216-049-11	RES, CHIP	1K	5%	1/10W
R956	1-216-821-11	METAL CHIP	1K	5%	1/16W
R957	1-216-851-11	METAL CHIP	330K	5%	1/16W
R958	1-216-033-00	METAL CHIP	220	5%	1/10W
R970	1-216-817-11	METAL CHIP	470	5%	1/16W
R971	1-216-817-11	METAL CHIP	470	5%	1/16W
R972	1-216-817-11	METAL CHIP	470	5%	1/16W
R973	1-216-817-11	METAL CHIP	470	5%	1/16W
R975	1-216-817-11	METAL CHIP	470	5%	1/16W
R976	1-216-817-11	METAL CHIP	470	5%	1/16W
R977	1-216-817-11	METAL CHIP	470	5%	1/16W
R980	1-216-864-11	SHORT	0		
R999	1-216-864-11	SHORT	0		
		< ROTARY ENCODER >			
RE901	1-475-014-11	ENCODER, ROTARY (VOLUME/BASS/TREBLE/ BALANCE/FADER CONTROL)			
		< SWITCH >			
S901	1-771-884-21	SWITCH, TACTILE (WITH LED) (SEEK/AMS - ⏮ ◀◀)			
S902	1-771-884-21	SWITCH, TACTILE (WITH LED) (DISC +, PRST +)			
S903	1-771-884-21	SWITCH, TACTILE (WITH LED) (SEEK/AMS + ⏭ ▶▶)			
S904	1-771-884-21	SWITCH, TACTILE (WITH LED) (DISC -, PRST -)			
**********					
*	A-3294-866-A	MAIN BOARD, COMPLETE **********			
*	3-040-996-21	HEAT SINK (2P)			
*	3-040-998-01	BRACKET (IC)			
*	3-041-011-01	HEAT SINK (REG)			
	7-685-647-79	SCREW +BVTP 3X10 TYPE-2 IT-3			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
	7-685-795-09	SCREW +PTT 2.6X12 (S)			
		< CAPACITOR/SHORT >			
C1	1-163-233-11	CERAMIC CHIP	18PF	5%	50V

Ref. No.	Part No.	Description			Remark
C3	1-124-584-00	ELECT	100uF	20%	10V
C4	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C6	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C7	1-124-589-11	ELECT	47uF	20%	16V
C13	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C14	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C52	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C53	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C54	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C55	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C56	1-124-589-11	ELECT	47uF	20%	16V
C57	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C58	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C59	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C60	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C61	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C62	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C63	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C90	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C91	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C92	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C93	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C94	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C95	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C96	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C97	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C98	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C101	1-126-160-11	ELECT	1uF	20%	50V
C110	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C111	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C113	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C121	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C122	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C123	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C131	1-124-233-11	ELECT	10uF	20%	16V
C141	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C142	1-126-160-11	ELECT	1uF	20%	50V
C151	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C152	1-124-584-00	ELECT	100uF	20%	10V
C153	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C156	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C157	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C159	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C161	1-124-233-11	ELECT	10uF	20%	16V
C162	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C171	1-126-163-11	ELECT	4.7uF	20%	50V
C172	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C173	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C174	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C181	1-126-163-11	ELECT	4.7uF	20%	50V
C182	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C183	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C184	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C191	1-216-295-00	SHORT	0		
C192	1-216-295-00	SHORT	0		
C193	1-216-295-00	SHORT	0		
C201	1-126-160-11	ELECT	1uF	20%	50V
C210	1-163-251-11	CERAMIC CHIP	100PF	5%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C241	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C242	1-126-160-11	ELECT	1uF	20%	50V
C271	1-126-163-11	ELECT	4.7uF	20%	50V
C272	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C273	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C274	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C281	1-126-163-11	ELECT	4.7uF	20%	50V
C282	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C283	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C284	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C361	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C362	1-126-157-11	ELECT	10uF	20%	16V
C363	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C364	1-126-157-11	ELECT	10uF	20%	16V
C368	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C369	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C370	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C371	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C372	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C373	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C374	1-124-584-00	ELECT	100uF	20%	10V
C375	1-124-584-00	ELECT	100uF	20%	10V
C502	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C503	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C504	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C505	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C506	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C507	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C508	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C509	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C510	1-124-584-00	ELECT	100uF	20%	10V
C511	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C512	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C513	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C551	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C552	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C571	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C601	1-135-473-21	ELECT	3300uF	20%	16V
C602	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C603	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C611	1-126-160-11	ELECT	1uF	20%	50V
C612	1-126-160-11	ELECT	1uF	20%	50V
C614	1-126-157-11	ELECT	10uF	20%	16V
C616	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C617	1-136-165-00	MYLAR	0.1uF	5%	50V
C621	1-124-589-11	ELECT	47uF	20%	16V
C622	1-126-160-11	ELECT	1uF	20%	50V
C623	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C631	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C632	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C641	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C653	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C654	1-125-710-11	DOUBLE LAYER	0.1F		5.5V
C655	1-124-584-00	ELECT	100uF	20%	10V
C661	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C671	1-126-157-11	ELECT	10uF	20%	16V
C672	1-126-157-11	ELECT	10uF	20%	16V
C673	1-126-157-11	ELECT	10uF	20%	16V
C674	1-124-233-11	ELECT	10uF	20%	16V
C675	1-124-233-11	ELECT	10uF	20%	16V
C676	1-126-157-11	ELECT	10uF	20%	16V
C682	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C701	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C702	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C703	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C704	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C705	1-126-935-11	ELECT	470uF	20%	16V

< CONNECTOR >

CN301	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P
CN500	1-784-456-11	CONNECTOR, FFC/FPC 14P
CN601	1-774-701-11	PIN, CONNECTOR 16P
CN701	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)

< JACK >

CNJ151	1-774-700-11	JACK, PIN 6P (BUS AUDIO IN, AUDIO OUT REAR/FRONT)

< DIODE >

D1	8-719-073-01	DIODE	MA111-TX
D2	8-719-067-56	DIODE	MA112-TX
D90	8-719-073-01	DIODE	MA111-TX
D91	8-719-073-01	DIODE	MA111-TX
D92	8-719-976-99	DIODE	UDZ-TE-17-5.1B
D131	8-719-422-12	DIODE	UDZ-TE-17-3.9B
D301	8-719-914-44	DIODE	DAP202K-T-146
D302	8-719-073-01	DIODE	MA111-TX
D361	8-719-034-74	DIODE	MA4120-M (TA)
D362	8-719-158-15	DIODE	UDZ-TE-17-5.6B
D501	8-719-914-44	DIODE	DAP202K-T-146
D502	8-719-073-01	DIODE	MA111-TX
D551	8-719-158-49	DIODE	UDZ-TE-17-12B
D552	8-719-056-82	DIODE	UDZ-TE-17-6.2B
D553	8-719-056-82	DIODE	UDZ-TE-17-6.2B
D554	8-719-056-82	DIODE	UDZ-TE-17-6.2B
D555	8-719-056-82	DIODE	UDZ-TE-17-6.2B
D556	8-719-056-82	DIODE	UDZ-TE-17-6.2B
D557	8-719-056-82	DIODE	UDZ-TE-17-6.2B
D558	8-719-056-82	DIODE	UDZ-TE-17-6.2B
D559	8-719-056-82	DIODE	UDZ-TE-17-6.2B
D560	8-719-056-82	DIODE	UDZ-TE-17-6.2B
D561	8-719-056-93	DIODE	UDZ-TE-17-18B
D562	8-719-056-82	DIODE	UDZ-TE-17-6.2B
D563	8-719-109-97	DIODE	MA4068-M (TA)
D564	8-719-109-97	DIODE	MA4068-M (TA)
D571	8-719-073-01	DIODE	MA111-TX
D601	8-719-049-38	DIODE	1N5404TU
D602	8-719-056-93	DIODE	UDZ-TE-17-18B
D603	8-719-056-93	DIODE	UDZ-TE-17-18B
D604	8-719-056-82	DIODE	UDZ-TE-17-6.2B
D605	8-719-056-93	DIODE	UDZ-TE-17-18B
D611	8-719-079-55	DIODE	PTZ-TE25-22
D612	8-719-079-55	DIODE	PTZ-TE25-22
D613	8-719-079-55	DIODE	PTZ-TE25-22

Ref. No.	Part No.	Description	Remark
D614	8-719-079-55	DIODE PTZ-TE25-22	
D615	8-719-079-55	DIODE PTZ-TE25-22	
D616	8-719-079-55	DIODE PTZ-TE25-22	
D617	8-719-079-55	DIODE PTZ-TE25-22	
D618	8-719-079-55	DIODE PTZ-TE25-22	
D621	8-719-422-12	DIODE UDZ-TE-17-3.9B	
D622	8-719-073-01	DIODE MA111-TX	
D624	8-719-158-15	DIODE RD5.6SB	
D631	8-719-423-26	DIODE MA8110-H-TX	
D653	8-719-073-01	DIODE MA111-TX	
D661	8-719-073-01	DIODE MA111-TX	
D662	8-719-420-14	DIODE MA8082-M (TX)	
D671	8-719-053-18	DIODE 1SR154-400TE-25	
D672	8-719-053-18	DIODE 1SR154-400TE-25	
D673	8-719-053-18	DIODE 1SR154-400TE-25	
D674	8-719-053-18	DIODE 1SR154-400TE-25	
D675	8-719-067-56	DIODE MA112-TX	
D676	8-719-073-01	DIODE MA111-TX	
D677	8-719-073-01	DIODE MA111-TX	
D701	8-719-978-69	DIODE UDZ-TE-17-16B	
D702	8-719-017-62	DIODE MA8068-L-TX	
D703	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D704	8-719-056-93	DIODE UDZ-TE-17-18B	
D705	8-719-056-93	DIODE UDZ-TE-17-18B	
D706	8-719-072-70	DIODE MA2ZD14001S0	
D708	8-719-073-01	DIODE MA111-TX	
D709	8-719-073-01	DIODE MA111-TX	
D710	8-719-073-01	DIODE MA111-TX	
		< COIL >	
FB362	1-414-233-22	INDUCTOR CHIP 0uH	
FB501	1-414-233-22	INDUCTOR CHIP 0uH	
		< FUSE >	
FU601	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
		< IC >	
IC51	8-759-650-68	IC SAA6588T/V2-118	
IC90	8-759-909-71	IC BA4558F-E2	
IC151	8-759-653-27	IC TDA7402TR	
IC501	8-759-663-56	IC MB90574BPMT-G-266-BND	
IC611	8-759-663-88	IC TA8268H	
IC652	8-759-574-61	IC XC61AN4302MR	
IC671	8-759-661-47	IC BA4908-V3	
IC701	8-759-449-89	IC BA8270F-E2	
		< JACK >	
J1	1-764-808-21	JACK (ANT) (FM/AM ANTENNA)	
J501	1-566-822-41	JACK (REMOTE IN)	
		< RESISTER >	
JC1	1-216-296-00	SHORT 0	
JC2	1-216-296-00	SHORT 0	
JC4	1-216-296-00	SHORT 0	
JC5	1-216-296-00	SHORT 0	
JC16	1-216-295-00	SHORT 0	
JC31	1-216-295-00	SHORT 0	
JC50	1-216-295-00	SHORT 0	
JC54	1-216-295-00	SHORT 0	
JC90	1-216-295-00	SHORT 0	
JC191	1-216-295-00	SHORT 0	
JC192	1-216-295-00	SHORT 0	
JC193	1-216-295-00	SHORT 0	
JC194	1-216-295-00	SHORT 0	
JC301	1-216-864-11	SHORT 0	
JC601	1-216-864-11	SHORT 0	
JC671	1-216-295-00	SHORT 0	
JC673	1-216-864-11	SHORT 0	
		< COIL >	
L601	1-419-476-11	INDUCTOR 250uH	
L671	1-410-989-11	INDUCTOR CHIP 0.47uH	
		< TRANSISTOR >	
Q1	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q90	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q111	8-729-920-21	TRANSISTOR DTC314TK-T-146	
Q121	8-729-920-21	TRANSISTOR DTC314TK-T-146	
Q131	8-729-921-25	TRANSISTOR FMC2-T148	
Q171	8-729-920-21	TRANSISTOR DTC314TK-T-146	
Q181	8-729-920-21	TRANSISTOR DTC314TK-T-146	
Q250	8-729-921-25	TRANSISTOR FMC2-T148	
Q271	8-729-920-21	TRANSISTOR DTC314TK-T-146	
Q281	8-729-920-21	TRANSISTOR DTC314TK-T-146	
Q361	8-729-019-00	TRANSISTOR 2SD2394-G	
Q362	8-729-019-00	TRANSISTOR 2SD2394-G	
Q363	8-729-921-25	TRANSISTOR FMC2-T148	
Q551	8-729-921-25	TRANSISTOR FMC2-T148	
Q571	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q621	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q622	8-729-021-94	FET 2SK1657-T1B	
Q631	8-729-423-99	TRANSISTOR 2SD2137-OP-TA	
Q633	8-729-921-25	TRANSISTOR FMC2-T148	
Q651	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q652	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q661	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q701	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q704	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q705	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q706	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
		< RESISTOR >	
R1	1-216-295-00	SHORT 0	
R4	1-216-025-00	RES, CHIP 100 5% 1/10W	
R5	1-216-025-00	RES, CHIP 100 5% 1/10W	
R6	1-216-025-00	RES, CHIP 100 5% 1/10W	
R7	1-216-025-00	RES, CHIP 100 5% 1/10W	
R8	1-216-295-00	SHORT 0	
R9	1-216-041-00	METAL CHIP 470 5% 1/10W	
R12	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R20	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R53	1-216-853-11	METAL CHIP 470K 5% 1/16W	
R54	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R55	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	

MAIN

Ref. No.	Part No.	Description			Remark
R56	1-216-817-11	METAL CHIP	470	5%	1/16W
R57	1-216-809-11	METAL CHIP	100	5%	1/16W
R58	1-216-025-00	RES, CHIP	100	5%	1/10W
R59	1-216-001-00	METAL CHIP	10	5%	1/10W
R60	1-216-797-11	METAL CHIP	10	5%	1/16W
R90	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R91	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R92	1-216-025-00	RES, CHIP	100	5%	1/10W
R93	1-216-845-11	METAL CHIP	100K	5%	1/16W
R94	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R95	1-216-121-00	RES, CHIP	1M	5%	1/10W
R96	1-216-025-00	RES, CHIP	100	5%	1/10W
R97	1-216-833-11	RES, CHIP	10K	5%	1/16W
R98	1-216-833-11	RES, CHIP	10K	5%	1/16W
R108	1-216-295-00	SHORT	0		
R111	1-216-864-11	SHORT	0		
R112	1-216-841-11	METAL CHIP	47K	5%	1/16W
R121	1-216-049-11	RES, CHIP	1K	5%	1/10W
R122	1-216-085-00	METAL CHIP	33K	5%	1/10W
R131	1-216-037-00	METAL CHIP	330	5%	1/10W
R132	1-216-045-00	METAL CHIP	680	5%	1/10W
R141	1-216-025-00	RES, CHIP	100	5%	1/10W
R142	1-216-073-00	METAL CHIP	10K	5%	1/10W
R152	1-216-841-11	METAL CHIP	47K	5%	1/16W
R153	1-216-025-00	RES, CHIP	100	5%	1/10W
R154	1-216-025-00	RES, CHIP	100	5%	1/10W
R156	1-216-809-11	METAL CHIP	100	5%	1/16W
R171	1-216-033-00	METAL CHIP	220	5%	1/10W
R172	1-216-081-00	METAL CHIP	22K	5%	1/10W
R173	1-216-089-00	RES, CHIP	47K	5%	1/10W
R181	1-216-033-00	METAL CHIP	220	5%	1/10W
R182	1-216-081-00	METAL CHIP	22K	5%	1/10W
R183	1-216-089-00	RES, CHIP	47K	5%	1/10W
R208	1-216-295-00	SHORT	0		
R241	1-216-025-00	RES, CHIP	100	5%	1/10W
R242	1-216-073-00	METAL CHIP	10K	5%	1/10W
R271	1-216-033-00	METAL CHIP	220	5%	1/10W
R272	1-216-081-00	METAL CHIP	22K	5%	1/10W
R273	1-216-089-00	RES, CHIP	47K	5%	1/10W
R281	1-216-033-00	METAL CHIP	220	5%	1/10W
R282	1-216-081-00	METAL CHIP	22K	5%	1/10W
R283	1-216-089-00	RES, CHIP	47K	5%	1/10W
R361	1-216-041-00	METAL CHIP	470	5%	1/10W
R362	1-216-041-00	METAL CHIP	470	5%	1/10W
R363	1-216-041-00	METAL CHIP	470	5%	1/10W
R364	1-216-041-00	METAL CHIP	470	5%	1/10W
R504	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R505	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R506	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R507	1-216-073-00	METAL CHIP	10K	5%	1/10W
R509	1-216-097-00	RES, CHIP	100K	5%	1/10W
R520	1-216-097-00	RES, CHIP	100K	5%	1/10W
R522	1-216-097-00	RES, CHIP	100K	5%	1/10W
R523	1-216-845-11	METAL CHIP	100K	5%	1/16W
R524	1-216-073-00	METAL CHIP	10K	5%	1/10W
R525	1-216-073-00	METAL CHIP	10K	5%	1/10W
R526	1-216-097-00	RES, CHIP	100K	5%	1/10W
R529	1-216-049-11	RES, CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R531	1-216-839-11	METAL CHIP	33K	5%	1/16W
R532	1-216-833-11	RES, CHIP	10K	5%	1/16W
R533	1-216-833-11	RES, CHIP	10K	5%	1/16W
R534	1-216-097-00	RES, CHIP	100K	5%	1/10W
R535	1-216-845-11	METAL CHIP	100K	5%	1/16W
R537	1-216-097-00	RES, CHIP	100K	5%	1/10W
R538	1-216-097-00	RES, CHIP	100K	5%	1/10W
R539	1-216-097-00	RES, CHIP	100K	5%	1/10W
R540	1-216-097-00	RES, CHIP	100K	5%	1/10W
R542	1-216-089-00	RES, CHIP	47K	5%	1/10W
R545	1-216-097-00	RES, CHIP	100K	5%	1/10W
R546	1-216-097-00	RES, CHIP	100K	5%	1/10W
R548	1-216-097-00	RES, CHIP	100K	5%	1/10W
R551	1-249-413-11	CARBON	470	5%	1/4W
R552	1-216-025-00	RES, CHIP	100	5%	1/10W
R553	1-216-025-00	RES, CHIP	100	5%	1/10W
R554	1-216-025-00	RES, CHIP	100	5%	1/10W
R555	1-216-025-00	RES, CHIP	100	5%	1/10W
R556	1-216-025-00	RES, CHIP	100	5%	1/10W
R557	1-216-025-00	RES, CHIP	100	5%	1/10W
R558	1-216-025-00	RES, CHIP	100	5%	1/10W
R559	1-216-025-00	RES, CHIP	100	5%	1/10W
R560	1-216-025-00	RES, CHIP	100	5%	1/10W
R561	1-208-806-11	RES, CHIP	10K	0.5%	1/10W
R562	1-208-806-11	RES, CHIP	10K	0.5%	1/10W
R563	1-216-845-11	METAL CHIP	100K	5%	1/16W
R564	1-216-845-11	METAL CHIP	100K	5%	1/16W
R565	1-216-025-00	RES, CHIP	100	5%	1/10W
R567	1-249-411-11	CARBON	330	5%	1/4W
R572	1-216-809-11	METAL CHIP	100	5%	1/16W
R573	1-216-809-11	METAL CHIP	100	5%	1/16W
R600	1-216-097-00	RES, CHIP	100K	5%	1/10W
R601	1-216-073-00	METAL CHIP	10K	5%	1/10W
R603	1-216-073-00	METAL CHIP	10K	5%	1/10W
R611	1-216-833-11	RES, CHIP	10K	5%	1/16W
R612	1-216-073-00	METAL CHIP	10K	5%	1/10W
R621	1-216-805-11	METAL CHIP	47	5%	1/16W
R622	1-216-864-11	SHORT	0		
R624	1-216-295-00	SHORT	0		
R626	1-216-861-11	METAL CHIP	2.2M	5%	1/16W
R631	1-249-385-11	CARBON	2.2	5%	1/6W
R632	1-249-385-11	CARBON	2.2	5%	1/6W
R636	1-216-037-00	METAL CHIP	330	5%	1/10W
R641	1-216-849-11	METAL CHIP	220K	5%	1/16W
R642	1-216-853-11	METAL CHIP	470K	5%	1/16W
R651	1-216-113-00	METAL CHIP	470K	5%	1/10W
R652	1-216-845-11	METAL CHIP	100K	5%	1/16W
R653	1-208-806-11	RES, CHIP	10K	0.5%	1/10W
R654	1-216-833-11	RES, CHIP	10K	5%	1/16W
R655	1-216-809-11	METAL CHIP	100	5%	1/16W
R656	1-216-809-11	METAL CHIP	100	5%	1/16W
R661	1-247-839-11	CARBON	2.2K	5%	1/4W
R662	1-216-081-00	METAL CHIP	22K	5%	1/10W
R663	1-216-841-11	METAL CHIP	47K	5%	1/16W
R664	1-216-841-11	METAL CHIP	47K	5%	1/16W
R682	1-216-089-00	RES, CHIP	47K	5%	1/10W
R701	1-216-805-11	METAL CHIP	47	5%	1/16W

Ref. No.	Part No.	Description			Remark
R702	1-216-073-00	METAL CHIP	10K	5%	1/10W
R703	1-216-025-00	RES, CHIP	100	5%	1/10W
R704	1-216-809-11	METAL CHIP	100	5%	1/16W
R707	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R713	1-216-841-11	METAL CHIP	47K	5%	1/16W
R714	1-216-841-11	METAL CHIP	47K	5%	1/16W
R715	1-216-845-11	METAL CHIP	100K	5%	1/16W
R716	1-216-809-11	METAL CHIP	100	5%	1/16W
		< SWITCH >			
SW503	1-692-431-21	SWITCH, TACTILE (RESET)			
SW504	1-771-540-11	SWITCH, PUSH (1 KEY) (NOSE DETECT)			
		< THERMISTOR >			
TH701	1-803-350-21	THERMISTOR, POSITIVE			
		< TUNER UNIT >			
TU1	A-3320-738-A	TUNER UNIT (TUX-020)			
		< VIBRATOR >			
X51	1-579-242-41	VIBRATOR, CRYSTAL (4.332MHz)			
X501	1-767-833-21	VIBRATOR, CERAMIC (3.68MHz)			
X502	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			

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	A-3326-034-A	SENSOR BOARD, COMPLETE			
		**********			

For the parts on the SENSOR board, replace the entire mounted board.

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*	A-3326-036-A	SERVO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C11	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C101	1-104-543-11	FILM CHIP	0.0022uF	5%	50V
C102	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C103	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C104	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C105	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C106	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C107	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C108	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C109	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C201	1-104-543-11	FILM CHIP	0.0022uF	5%	50V
C202	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C301	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C302	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C304	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C305	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C306	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C307	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C308	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C309	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C310	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C311	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C314	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C315	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C316	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C317	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C318	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V
C319	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V
C320	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C321	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C322	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C324	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C325	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C326	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C327	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C328	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C329	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C330	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C331	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C333	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C334	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C335	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C336	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C337	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C338	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C339	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C340	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C341	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C342	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C343	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C344	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V
C345	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C346	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V
C347	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C348	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C349	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C350	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C351	1-104-852-11	TANTALUM CHIP	22uF	20%	10V
C352	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C353	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C356	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C357	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C358	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C359	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C361	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C362	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C402	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C403	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C501	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C503	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C504	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C505	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C506	1-104-852-11	TANTALUM CHIP	22uF	20%	10V
C510	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C511	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C512	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C513	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C514	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C515	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C516	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

SERVO

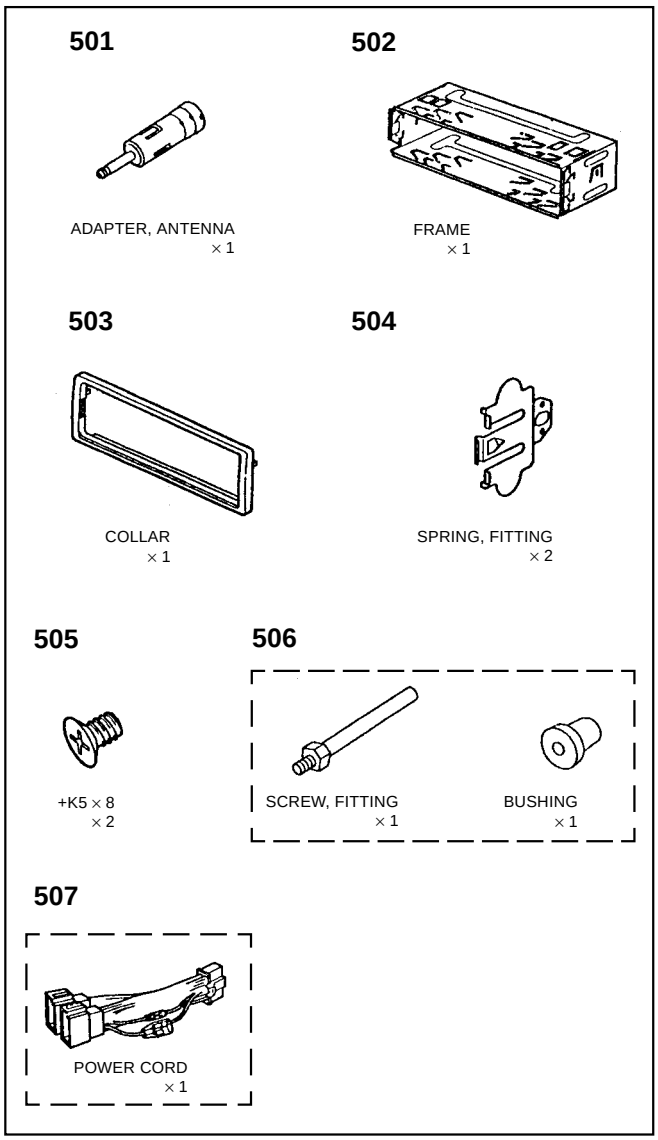
Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
CN101	1-764-616-12	HOUSING, CONNECTOR (PC BOARD) 30P	
CN102	1-573-929-21	CONNECTOR, FFC/FPC (ZIF) 20P	
CN103	1-764-439-21	CONNECTOR, FPC 11P	
		< DIODE >	
D401	8-719-157-93	DIODE DTZ-TT11-3.0B	
D501	8-719-988-61	DIODE 1SS355TE-17	
		< FERRITE BEAD >	
FB301	1-414-235-22	FERRITE BEAD INDUCTOR CHIP	
FB302	1-414-760-21	FERRITE BEAD INDUCTOR CHIP	
		< IC >	
IC101	8-759-571-84	IC PCM1718E/2K	
IC301	8-752-384-47	IC CXD2652AR	
IC302	8-752-080-95	IC CXA2523AR	
IC303	8-759-430-25	IC BH6511FS	
IC304	8-759-096-87	IC TC7WU04FU (TE12R)	
IC305	8-759-040-83	IC BA6287F	
IC306	8-759-058-62	IC TC7S08FU (TE85R)	
IC307	8-759-368-16	IC MN41V4400TT-08S	
IC401	8-759-909-71	IC BA4558F-E2	
IC501	8-752-909-21	IC CXP84340-217Q	
IC502	8-759-238-47	IC TC74HCT7007AF (EL)	
IC503	8-759-238-47	IC TC74HCT7007AF (EL)	
		< COIL >	
L101	1-412-058-11	INDUCTOR CHIP 10uH	
L102	1-412-058-11	INDUCTOR CHIP 10uH	
L301	1-412-058-11	INDUCTOR CHIP 10uH	
L302	1-412-058-11	INDUCTOR CHIP 10uH	
L303	1-412-039-51	INDUCTOR CHIP 100uH	
L304	1-412-039-51	INDUCTOR CHIP 100uH	
L305	1-412-039-51	INDUCTOR CHIP 100uH	
L306	1-412-039-51	INDUCTOR CHIP 100uH	
L501	1-412-058-11	INDUCTOR CHIP 10uH	
		< TRANSISTOR >	
Q301	8-729-230-49	TRANSISTOR 2SC2712Y-TE85L	
Q302	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q401	8-729-920-85	TRANSISTOR 2SD1664-T101-QR	
Q402	8-729-106-60	TRANSISTOR 2SB1132-T101-QR	
Q403	8-729-421-22	TRANSISTOR UN2211-TX	
		< RESISTOR >	
R101	1-216-073-00	METAL CHIP 10K 5%	1/10W
R102	1-216-833-11	RES, CHIP 10K 5%	1/16W
R104	1-216-049-11	RES, CHIP 1K 5%	1/10W
R201	1-216-073-00	METAL CHIP 10K 5%	1/10W
R202	1-216-049-11	RES, CHIP 1K 5%	1/10W
R301	1-216-809-11	METAL CHIP 100 5%	1/16W
R302	1-216-809-11	METAL CHIP 100 5%	1/16W
R303	1-216-809-11	METAL CHIP 100 5%	1/16W
R304	1-216-809-11	METAL CHIP 100 5%	1/16W
R305	1-216-809-11	METAL CHIP 100 5%	1/16W
R306	1-216-809-11	METAL CHIP 100 5%	1/16W
R307	1-216-809-11	METAL CHIP 100 5%	1/16W
R308	1-216-809-11	METAL CHIP 100 5%	1/16W
R311	1-216-821-11	METAL CHIP 1K 5%	1/16W
R312	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R316	1-216-821-11	METAL CHIP 1K 5%	1/16W
R317	1-216-809-11	METAL CHIP 100 5%	1/16W
R318	1-216-833-11	RES, CHIP 10K 5%	1/16W
R319	1-216-845-11	METAL CHIP 100K 5%	1/16W
R320	1-216-855-11	METAL CHIP 680K 5%	1/16W
R324	1-216-827-11	METAL CHIP 3.3K 5%	1/16W
R325	1-216-821-11	METAL CHIP 1K 5%	1/16W
R327	1-216-821-11	METAL CHIP 1K 5%	1/16W
R328	1-216-811-11	METAL CHIP 150 5%	1/16W
R329	1-216-819-11	METAL CHIP 680 5%	1/16W
R330	1-216-853-11	METAL CHIP 470K 5%	1/16W
R331	1-216-809-11	METAL CHIP 100 5%	1/16W
R332	1-216-809-11	METAL CHIP 100 5%	1/16W
R333	1-216-819-11	METAL CHIP 680 5%	1/16W
R334	1-216-809-11	METAL CHIP 100 5%	1/16W
R335	1-216-815-11	METAL CHIP 330 5%	1/16W
R336	1-216-853-11	METAL CHIP 470K 5%	1/16W
R337	1-216-853-11	METAL CHIP 470K 5%	1/16W
R338	1-216-833-11	RES, CHIP 10K 5%	1/16W
R339	1-216-827-11	METAL CHIP 3.3K 5%	1/16W
R340	1-216-843-11	METAL CHIP 68K 5%	1/16W
R341	1-216-837-11	METAL CHIP 22K 5%	1/16W
R342	1-216-833-11	RES, CHIP 10K 5%	1/16W
R343	1-216-827-11	METAL CHIP 3.3K 5%	1/16W
R344	1-216-833-11	RES, CHIP 10K 5%	1/16W
R345	1-216-827-11	METAL CHIP 3.3K 5%	1/16W
R346	1-216-841-11	METAL CHIP 47K 5%	1/16W
R347	1-216-833-11	RES, CHIP 10K 5%	1/16W
R348	1-218-863-11	METAL CHIP 4.7K 0.5%	1/16W
R349	1-216-025-00	RES, CHIP 100 5%	1/10W
R350	1-216-142-00	RES, CHIP 4.7 5%	1/8W
R351	1-218-855-11	METAL CHIP 2.2K 0.5%	1/16W
R352	1-218-855-11	METAL CHIP 2.2K 0.5%	1/16W
R353	1-218-855-11	METAL CHIP 2.2K 0.5%	1/16W
R354	1-216-857-11	METAL CHIP 1M 5%	1/16W
R355	1-216-833-11	RES, CHIP 10K 5%	1/16W
R356	1-216-833-11	RES, CHIP 10K 5%	1/16W
R357	1-216-017-00	RES, CHIP 47 5%	1/10W
R359	1-216-864-11	METAL CHIP 0 5%	1/16W
R401	1-216-073-00	METAL CHIP 10K 5%	1/10W
R402	1-216-065-00	RES, CHIP 4.7K 5%	1/10W
R403	1-216-065-00	RES, CHIP 4.7K 5%	1/10W
R404	1-216-809-11	METAL CHIP 100 5%	1/16W
R405	1-218-847-11	METAL CHIP 1K 0.5%	1/16W
R406	1-218-869-11	METAL CHIP 8.2K 0.5%	1/16W
R501	1-216-821-11	METAL CHIP 1K 5%	1/16W
R502	1-216-821-11	METAL CHIP 1K 5%	1/16W
R503	1-216-821-11	METAL CHIP 1K 5%	1/16W
R504	1-216-821-11	METAL CHIP 1K 5%	1/16W
R505	1-216-821-11	METAL CHIP 1K 5%	1/16W
R506	1-216-845-11	METAL CHIP 100K 5%	1/16W
R507	1-218-863-11	METAL CHIP 4.7K 0.5%	1/16W
R510	1-216-845-11	METAL CHIP 100K 5%	1/16W
R511	1-216-847-11	METAL CHIP 150K 5%	1/16W

Ref. No.	Part No.	Description			Remark
R512	1-216-845-11	METAL CHIP	100K	5%	1/16W
R516	1-216-809-11	METAL CHIP	100	5%	1/16W
R517	1-216-809-11	METAL CHIP	100	5%	1/16W
R518	1-216-809-11	METAL CHIP	100	5%	1/16W
R519	1-216-809-11	METAL CHIP	100	5%	1/16W
R520	1-216-809-11	METAL CHIP	100	5%	1/16W
R521	1-216-809-11	METAL CHIP	100	5%	1/16W
R522	1-216-821-11	METAL CHIP	1K	5%	1/16W
R523	1-216-821-11	METAL CHIP	1K	5%	1/16W
R524	1-216-821-11	METAL CHIP	1K	5%	1/16W
R525	1-216-845-11	METAL CHIP	100K	5%	1/16W
R526	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R527	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R528	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R529	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R530	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R531	1-216-845-11	METAL CHIP	100K	5%	1/16W
R532	1-216-864-11	METAL CHIP	0	5%	1/16W
R533	1-216-845-11	METAL CHIP	100K	5%	1/16W
R534	1-216-845-11	METAL CHIP	100K	5%	1/16W
R535	1-216-845-11	METAL CHIP	100K	5%	1/16W
R536	1-216-864-11	METAL CHIP	0	5%	1/16W
R537	1-216-809-11	METAL CHIP	100	5%	1/16W
R538	1-216-845-11	METAL CHIP	100K	5%	1/16W
R539	1-216-845-11	METAL CHIP	100K	5%	1/16W
R540	1-216-845-11	METAL CHIP	100K	5%	1/16W
R542	1-216-845-11	METAL CHIP	100K	5%	1/16W
		< COMPOSITION CIRCUIT BLOCK >			
RB301	1-233-576-11	RES, CHIP NETWORK 100			
RB302	1-233-576-11	RES, CHIP NETWORK 100			
RB503	1-233-412-11	RES, CHIP NETWORK 1K (3216)			
		< THERMISTOR >			
TH501	1-810-421-11	THERMISTOR NTH5G36B103K01TE			
		< VIBRATOR >			
X301	1-767-429-21	VIBRATOR, CRYSTAL (22.5792MHz)			
X501	1-760-365-11	VIBRATOR, CERAMIC (10MHz)			
**********					
*	1-677-057-11	SUB BOARD			
		**********			
		< CONNECTOR >			
CNP810	1-794-064-11	SOCKET, CONNECTOR 14P			
CNP811	1-792-195-11	CABLE, FLEXIBLE FLAT			
		< DIODE >			
D806	8-719-109-97	DIODE MA4068-M (TA)			
D810	8-719-056-82	DIODE UDZ-TE-17-6.2B			
D811	8-719-056-82	DIODE UDZ-TE-17-6.2B			
D812	8-719-056-82	DIODE UDZ-TE-17-6.2B			
D813	8-719-056-82	DIODE UDZ-TE-17-6.2B			
D814	8-719-056-82	DIODE UDZ-TE-17-6.2B			

Ref. No.	Part No.	Description	Remark
		< LED >	
LED810	8-719-077-75	LED BR1101F-TR (MD DISC SLOT)	
		< SWITCH >	
LSW810	1-771-883-21	SWITCH, TACTILE (WITH LED) (⏏)	
**********			
		MISCELLANEOUS	
		**********	
17	1-776-527-61	CORD (WITH CONNECTOR) (ISO) (POWER)	
60	1-694-660-11	CONDUCTIVE BOARD, CONNECTION	
153	1-654-693-11	SENSOR FLEXIBLE BOARD	
⚠165	8-583-065-03	OPTICAL PICK-UP KMS-241C/J1RP	
CNP811	1-792-195-11	CABLE, FLEXIBLE, FLAT	
LCD901	1-803-889-11	DISPLAY PANEL, LIQUID CRYSTAL	
M901	A-3301-407-A	MOTOR ASSY, SP (SPINDLE)	
M902	A-3291-190-A	MOTOR ASSY, SL (SLED)	
M903	A-3291-191-A	MOTOR ASSY, LO (LOADING)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-621-772-20	SCREW +B 2X5	
#2	7-685-795-09	SCREW +PTT 2.6X12 (S)	
#3	7-685-793-09	SCREW +PTT 2.6X8 (S)	
#4	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
#5	7-685-851-04	SCREW +BVTT 2X4 (S)	
#6	7-624-102-04	STOP RING 1.5, TYPE-E	
#7	7-627-852-37	PRECISION SCREW +P 1.7X1.8 TYPE 3	
#8	7-621-772-08	SCREW +B 2X3	
#9	7-621-555-10	SCREW +K 2X3	
#11	7-685-791-09	SCREW +PTT 2.6X5 (S)	
#12	7-627-553-28	SCREW, PRECISION +P 2X2.5	
#13	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	3-044-659-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH, SWEDISH, PORTUGUESE, RUSSIAN) (AEP, UK)	
	3-044-659-21	MANUAL, INSTRUCTION (FRENCH, GERMAN, DUTCH, ITALIAN, GREEK) (Greman)	
	3-044-660-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, SWEDISH, PORTUGUESE, RUSSIAN) (AEP, UK)	
	3-044-660-21	MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN, DUTCH, ITALIAN, GREEK) (Greman)	
	X-3378-490-1	CASE (PANEL) ASSY (for FRANT PANEL)	
**********			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
		PARTS FOR INSTALLATION AND CONNECTION	
		**************************************	
501	1-465-459-21	ADAPTER, ANTENNA	
502	3-012-360-31	FRAME	
503	3-040-979-01	COLLAR	
504	3-233-644-01	SPRING, FITTING	
505	3-934-325-01	SCREW, +K (5X8) TAPPING	
506	X-3366-405-1	SCREW ASSY (EXP), FITTING	
507	1-776-527-61	CORD (WITH CONNECTOR) (ISO) (POWER)	



MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.1	2001.05	Change of Part No. for SPRING, FITTING (ECN-CSA04727)
1.0	2000.03	New